

Aviation News

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Army Air Forces' Fastest Plane: A striking flight view of the P-80, Lockheed's Shooting Star, which attains a speed "closer to the speed of sound than any plane has ever flown before," according to AAF officials. In this photo the clean lines of the Shooting Star are excellently shown. (Story on Page 8).

Contract Settlements Point Trend for Air Industry

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Proposed Safety Rules for Charter Flights Circulated

Affects all non-scheduled commercial operations; economic control action is now awaiting policy report.....Page 39

Airline Troop Movement Contract to Use Army C-47's

Carriers await details of plan that would place 70 to 80 new ships and 260 pilots at their disposal to aid redeploymentPage 46

Dominion-Local Airport Fund Gains Support in Canada

Provincial air conference welds proposals by various groups for government matching, dollar-for-dollar, local field programs.....Page 42

British Election Upset Leaves Air Policies Undecided

Signs point, however, to internal changes without revision of airline structure as it affects other nations.....Page 48

Patent Rule Changes Seen Future Competition Mold

Senate suggestion would make public property of post-war inventions made by manufacturers under government development contracts..Page 14

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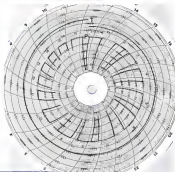


Chart showing instantaneous recorded results of pressure and flow test made upon Vickers Relief Valve having rating of 6000 psi at its normal rated capacity of 6 gpm. Time is in minutes. Gate "P" is in pressure and "F" is pressure.

Data recorded on chart also plotted on rectangular coordinates to permit more easy evaluation. Note that pressure varies only from 995 to 1030 psi when flow rate is increased from 1 to 16 gpm.



THE AVIATION NEWS

Washington Observer

RECONVERSION PRESSURE—Pressure is being put on in Washington for reconversion plans based on a sudden and rather near end of the Jap war. Need for such planning was recognized several weeks ago in some quarters and Robert Nathan, in charge of reconversion plans in the Office of Mobilization and Reconversion, is said to be devoting himself exclusively to this problem, with a program about ready for submission to Director John W. Snyder.

COMPENSATION BOOST—A phase of this program is said to propose a boost in unemployment compensation rates, for war workers displaced by contract cutbacks, to \$56 a week for a year. This may be a source proposal designed to speed favorable consideration of bills to up jobless payments around \$55 a week. The Senate Finance and Post War Reconstruction Policy and Planning committees under the chairmanship of Senator George are scheduled to start hearings on the proposals around October 8.

AIRCRAFT LAYOFFS—The layoff rate in the aircraft industry during May, for which there are official figures, was the highest since 1932. Bureau of Labor Statistics reports that for each 1,000 workers, 121 were separated during May. Layoffs were 31, an increase from 14 in April. 54 quit, 8 were discharged and 1 went into the armed services. This was due to actual and imminent aircraft cutback orders. Aircraft cancellations during May amounted at 10 per 1,000.

CANADIAN CUTBACKS—A hot issue in Washington is the cutback policy on Canadian aircraft contracts. Because of the speed with which the Canadian industry is able to convert, heavy aircraft orders were placed north of the border. This took a considerable load off U. S. companies and the Canadian facilities produced very well throughout the war. With cutbacks under way, matter of whether to lop off Canadian companies first, treat them on even basis with U. S. companies, or maintain them at the expense of U. S. concerns, came to the fore.

POLICY ON CANADA—U. S. policy in general has been in the everything possible to maintain Canadian economy. The policy is respect to aircraft is now being reviewed in high Washington quarters. Pending determination of that, the policy of treating Canadian aircraft manufacturers like those in the U. S. appears to hold. But that is that this policy will not be changed.



Flight view of the Shooting Star

GILES' ROLE—Informed AAF sources say General Giles was sent to the Pacific as a token tap to General MacArthur who has been seeking command of the 10th Air Force, now operating in the Pacific with the 20th and 31st Bomber Commands. Giles is deputy commander, responsible to General Arnold as 20th AF commander. The Navy figures in the picture, since the 20th operates directly under the Joint Chiefs of Staff and the Navy considers the 20th as a strategic bombing force coordinating with its operations and responsibilities.

SIGNIFICANT AAF CHANGES—Among the many notable changes at headquarters, Army Air Forces, the following are of special interest. The new staff chief of air staff AC/AS, Personnel, is Maj. Gen. Frederick Anderson, former operational deputy to General Spaatz, U. S. Strategic Air Forces (USSTAF), replacing Maj. Gen. Hubert B. Harman, who has a new assignment. Maj. Gen. Elwood B. ("Pop") Quisenberry, AC/AS, Intelligence, replacing Maj. Gen. James B. Hodges (new assignment), General Quisenberry was commander of the IX Tactical Air Command which worked in close cooperation with the First Army. Last, Gen. Hoyt S. Vandenberg, former commander of the Ninth Air Force, is the new AC/AS, Operations, Communications & Requirements, replacing Brig. Gen.



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Contract Settlement Records Point Trend For Air Industry

Contract agency work generally favored; full plane terminations pond; sudden price seen bogging machinery with thirty billions in new order endings plus fourteen billions in present unsettled commitments.

By WILLIAM KROGER

Since last Fall, in an atmosphere of slight publicity and little controversy, the Office of Contract Settlement has been working to untangle one of the most terrifically complex problems of readjustment from war to peace: settlement, with regard to both money and inventory, of cancelled war commitments.

The subject as yet is largely academic in the aircraft industry, which has gone through two termination peaks—October, 1944, and after V-E Day—but has not been hit full-on by terminations. Last week, a report to Congress on OCS operations could give many a yet-to-be-cancelled contractor a hint of his future.

Good, So-Far—By and large, the aircraft industry looks with approval on what has been done. However, it believes the test is yet to come.

Unsettled commitments on terminated contracts total \$14,700,000,000.

Should the war with Japan end within the next few months, \$30,000,000,000 in new terminations would be added. Some industry circles doubt that OCS machinery could absorb the load.

Danger Data—OCS recognizes the danger. Settlement is running to \$1,546,000,000 a month. This would have to be applied to \$4,000,000,000 a month should the war end soon, but could be cut a billion dollars should the war continue another year, the agency declares.

To June 30, this year, nearly \$16,000,000,000 in cancelled commitments have been settled. Despite the size of the backlog, contractors agencies, working under OCS direction, have attained considerable speed. Of 15,000 termi-

nated fixed-price contracts pending, less than 1,300 have been as process for more than six months.

In October, 1944, the backlog was \$14,300,000,000. It has risen less than three percent, although post-V-E Day cancellations tripled the average rate before March 31.

Low Average—While the settlement rate has varied overall it has been low—averaging about five percent on contracts totaling \$12,993,664,000.

Indicative of the variation is a survey of 965 cases. Aggregate claims were \$234,600,000. Payments were \$229,200,000—almost 96 cents on the dollar. Profits allowed averaged 5.5 percent in 425 cases examined.

Wright Way

Increase of the latest responsibility and authority of regional administrators and staffs of the Civil Aeronautics Administration is expected to result from a line of regional headquarters by T. P. Wright, CAA administrator.

This was indicated during the administrator's conferences with South Region officials at Santa Monica, Calif., last week, and in an line with a general reshaping of CAA administrative policies by Wright.

Airline File—While in Southern California, Wright was the guest of airlines at a reception in Los Angeles, and inspected post-war plans now under construction at major aircraft companies.

On the basis of OCS experience to date, contractors on cost-plus-a-fixed-fee agreement cannot look for the speedy settlement that has characterized the handling of the other type of contracts.

Unsettled—On June 30, 68 percent of the \$10,600,000,000 cost-



SECRET WEAPON OR BAD DREAM?

The queer-looking airplane shown above is neither, but rather a B-34 Liberator, ingeniously camouflaged at the AAF Center, Grinnell, to discourage Japanese suicide ramming tactics. Test officials finally discarded the quadruple camoufler in favor of better offensive tactics which cannot be disclosed.

plus commitments remained unsettled, and 45 percent of these open bids had been pending more than six months.

The element of CPFF contracts in the aircraft industry's greatest worry, and the source of the main complaint against the OCS record to date, is a large share of the industry's war work is done on such contracts. In addition to a slow rate of settlement, the industry has been fed with what it regards as unnecessarily minute audits.

A further factor has been the General Accounting Office. Although under the termination act, GAO can only audit for fraud, in practice it has been using its fine-tooth comb on completed portions of CPFF contracts, payments on which materially affect the termination settlement. There is, however, a reported change of attitude at GAO.

Final Clearance—Once regarded as potentially the greatest bottleneck in a return to civilian manufacture, clearance of plants is progressing satisfactorily. In most cases, inventories are being removed within 60 days after the manufacturer's request. Less than five percent of unfilled plant clearance requests have been pending more than 60 days.

Consequently, OCS reports, contracting and disposal agencies are now discussing the practice of using the full 60-day clearance period.

Private contractors, whose agreements have been terminated, are getting conversion funds generally within 30 days—mostly partial payments on pending settlements. The picture for subcontractors is not so bright. OCS states that subcontractors "frequently" have not received partial payments from prime contractors within the 30 days period.

Jet Speed Hint

First definite indication of a jet-propelled plane's speed came last week when a P-80 was clocked from Dayton, Ohio, to La Guardia Field in 63 minutes—an average speed of 558.4 mph. That this is certainly below top speed is evident both from the pilot's observation that he did not push the plane, and from the fact the time included takeoff. AAF has never applied for an official timing of a jetplane, presumably because it would mean releasing performance details so far restricted.

AAF Unveils Shooting Star But Hides Exact Top Speed

First public showings reveal speed of "more than" 550 mph, operation at altitudes above 45,000 feet and fuel capacity sufficient for long-range fighter missions; super smooth finish highlights technical features.

Just exactly how fast the Lockheed Shooting Star P-80, "the fastest plane in the world," will fly is still a secret, but the Army Air Forces last week lifted some of the veils on their sleek new jet-propelled fighter to admit its top speed is more than 550 mph, that it will operate at altitudes above 45,000 feet and will carry enough fuel for long range fighter missions.

The announcement came simultaneously with first public showings and flight exhibitions at the Shooting Star in New York, Washington, Los Angeles, Dallas, and Wright Field, Dayton, Ohio, in celebration of the AAF's 35th birthday, Aug. 1.

The engine actually has but one movable part, the impeller and turbine connected by a shaft, which spins at more than 10,000 revolutions per minute. Kerosene is burnt under the fuel, but for overseas operational use against Japan, high octane gasoline, more available there, can be used just as readily.

The jet engine is without carburetor, oil cooling system, complex ignition system, generators, and other complications of the reciprocating engine, and can be replaced in 10 minutes. Lubrication is simple, requiring oil only at some half dozen bearings. Use of magnesium for aluminum in the engine saved 160 pounds weight.

Thin Surface—One of the most obvious features of the plane is its glass-smooth "glass" finish

Rocket Fighter?

Speculation over the possibility that Lockheed Aircraft Corporation may have under wings a heretofore unnamed rocket fighter was aroused during a computer press interview following demonstration of the P-80 at Burbank, Calif.

C. L. Johnson, chief research engineer and designer of the P-80, was asked: "Have you ever experimented with a liquid rocket engine in the P-80?"

After a pause, Johnson replied, "not in a P-80," and grinned.

that adds much to the plane's speed and performance.

This is attained by cutting and surface-grinding rivets; applying a zinc chromate prime coat; enamel-filling all built joints and covering fuselage joints with epoxy meth tape applying a surface in preparation for the negative gray paint; baking the paint on in even layers enough to hold the entire plane; buff sanding and buffing, and finally spraying on a special wax and polishing it.

Aerodynamic smoothness of the Shooting Star is almost unmarred by external attachments, with the only protruberances on the all-metal semi-monocoque fuselage being the air intake and the plastic bubble canopy.

Kelley Wing — The knife-edged Hammer-Gaw wing tapes at both

leading and trailing edges and has its curve edge two inches behind midpoint of the fuselage. The cockpit is forward of the wing, in the plane's long slender nose, giving excellent pilot visibility.

The Superjet engine is buried in the fuselage behind the pilot, and azzos in air from two intakes molded into the fuselage at the wing roots.

Designed for production in approximately one-half the time hours used to make the Lockheed

P-38 Lightning, the P-80 is manufactured in four major assemblies, nose section, wing, outer fuselage and all fuselage sections with tail group.

Engine Access — Quick action forward fitments secure the nose and all fuselage to the center section so that they may be removed in minutes. Detachment of three fitments and the tail pipe clamp permits removal of the aft section making the engine accessible for maintenance. It may be "run up"

without removing it from the fuselage.

Sonic Approach—Lockheed Aircraft Corp., described the speed of the P-80 as "faster than the lap speed of any other plane in the skies and nearer to the speed of sound than any other vehicle has ever been able to achieve."

By removing the nose segment of an 30 caliber machine gun, and substituting a camera-equipped nose, the Shooting Star also serves as the AAF's fastest



AAF's P-80 Shooting Star Unveiled

Tail view of the Shooting Star



Another view of the P-30 Shooting Star

photo reconnaissance plane.

An ingenious system of self-sealing fuel tanks, combined with the light weight and tremendous thrust of the General Electric-designed Superjet engine, gives the plane a range far beyond that of earlier jet planes. Dropable wing tanks of special design are mounted on inner struts and folded into the extreme tips of the wings where they offer least interference to the smoothness of air flow.

Greatest Power—While no specific information concerning the actual thrust possible (one thrust pound equals one horsepower at 375 mph) developed by the GE Superjet was disclosed, it was revealed that the engine gives the Shooting Star "more power than there is in any other fighting plane," that the Superjet is "far more powerful than any existing conventional reciprocating gasoline engine," and that it develops "several times the power" of conventional engines of equal weight. Absence of a propeller makes

possible use of a short-legged hydraulic retractable landing gear, which would not be possible if propeller clearance were required.

As extremely maneuverable in flight, with the fastest roll of any plane in the world. Stall characteristics are good and the plane is hard to spin, recovering from a spin in one-fourth to one-half turn.

Pilot Limit—Even at great speeds, maneuverability is limited only to the pilot's ability to withstand the gravity forces of tight turns and pullouts. This is attributed largely to the electric aileron, elevator trim tabs, hydraulic-boost ailerons, and the balanced aileronage controls.

Chaulis-jointed fuselage flaps form an unbroken line with the wing flaps across the undercarriage of the plane when extended. The fuselage flaps may be operated with or without the split-type wing flaps, and serve to slow the plane for landing at a speed about 166 mph.

Protective armor for the pilot includes an armor glass windshield, steel armor plate on the upper forehead and back of the pilot's seat and head, and dorsal plate aft of the front bulkhead.

Gun Position—The six machine guns are placed in the lower half of the nose, to prevent gunflashes from affecting pilot vision. The electrical gyro-lead computer gun-sight uses a reflex optical system. The six ammunition boxes are above the guns they serve, taking advantage of gravity but feeding bullets steadily no matter what maneuver the plane makes in combat. Magazines and guns can be replaced in less than 15 minutes. A gas ejector is mounted near the right air intake.

The pressurized cockpit is

Sound Effects

The sounds emitted by the GE Superjet engine in the Lockheed P-30 Shooting Star offset the absence of ground-level vibrations. When flying at high altitudes the engine is heard as a sustained high pitched whistle or scream, but when the jet fighter "cascades" a field, its sudden takeoff of sound is like a nearby thunderclap with the plane out of sight before the echoes die away.

equipped with a device which automatically reduces pressure when the gun switch turns on, to protect the pilot from explosive decompression if an enemy hit opens up the pressure seal. The cockpit may be heated or cooled at the will of the pilot.

Credit Shared—Credit for the plane's performance is shared by Lockheed, General Electric, Allison division of General Motors, now making some of the Superjets, and the Air Technical Service Command engineers who worked with the manufacturers. Within 143 days after the first request to build the plane, the prototype had been designed, built, and delivered to a test base.—A. McE

C-W Buffalo Plant Inspection Blasted

Declaring that subversion and administration of the AAF's inspection at Carrier-Wright's Buffalo plant is "inadequate," the Aviation Subcommittee of the Senate War Investigating Committee has called for "prompt and thorough investigation of company and AAF inspection organizations."

The subcommittee's survey resulted in criticism on the Senate floor by Sen. William Langer (R-N.D.). It is based primarily on production of the C-46 and P-40.

Improvement Needed—The report contended that since the fall of 1944 the "quality of inspection has shown a marked improvement." However, further progress is desired.

In a statement released concurrently with the report, Curtiss-Wright asserted "the company welcomes the committee's recommendations and will make the fullest possible use of them."

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heat-resistant products for eliminating hot gases and converting waste heat into a source of useful energy.

After victory, these skills which are now being devoted to production for the aviation industry, will be available to other manufacturers whose problems deal with fabricating heat and corrosion resistant products.

P-30 Data

Performance data and specifications of the jet-propelled Lockheed Shooting Star P-30, as released last week by the AAF for the first time, include:
Top speed—More than 388 mph.
Cruise—More than 48,000 feet range—Enough for long-range fighter operations.
Wingspan—36 ft., 30 1/2 in.
Length—34 ft., 6 in.
Height—31 ft., 4 in.
Weight, empty—2,000 pounds.
Gross weight (max. fuel)—14,000 pounds.
Powerplant—GE Superjet, of undischarged power.
Armament—6, .50 caliber, machine guns in nose.

Tax Adjustment Legislation Fits Air Industry Planning

Carry-back of losses to more profitable war years seen as means of survival for some; millions in "conversion money" placed at manufacturers' disposal as critical transition period approaches.

Quiet satisfaction is now being expressed in the aircraft industry over the recently-enacted tax adjustment bill, since from the standpoint of its long-range effects upon the tax structure, then because of the immediate cash benefits available under the legislation.

Although the act modestly available to the industry in the next 12 months many millions of dollars of "conversion money," it also firmly establishes the carry-back for at least another several years in many industry quarters, this is regarded as the bill's most important feature.

Excesses Relief—After the end of the war, it is certain there will be a strong move to abolish the excess-profits tax. For some time it has been felt that when the excess-profits levy is dropped, the carry-back allowance likewise will be abandoned. It is expected that in the year following V-J Day, the industry will go deeply in the red. Being able to carry back losses to profitable war years will furnish cash that might mean the difference between survival or failure.

Under the Tax Adjustment Act of 1945, many firms in the next year will receive refunds resulting from carrying back to tax returns of prior years the net operating losses incurred in the current year. This will be true chiefly of companies whose contracts have been cut-back or cancelled.

Industry experts take the view that, having made it possible for a small segment of business to take advantage of carry-back refunds now, Congress could not later deny the same benefit to other manufacturers. They believe a precedent has thus been established that will be of major importance as the critical period after the war.

80% Exemption—The provision in the adjustment act allowing, from \$10,000 to \$25,000, the excess-profits tax exemption is not seen as any great relief to the aircraft industry. Only about 40 percent of the \$18,000 difference will be available as cash receive.

More helpful than that part of the bill is the moving up of the maturity date on post-war refund bonds to January 1, 1946, and the

immediate freeing of the 10 percent post-war credit on excess-profits taxes.

In accordance with these sections, the manufacturers will receive, either as a credit against current taxes or as cash refunds, 10 percent of excess-profits paid from 1941 through 1944. Even a loose approximation of the amount cannot be obtained, but that it would be considerable is indicated in the 1944 annual reports of just two of the large aircraft companies which had not made a combined total of more than \$20,000,000 for excess-profits taxes alone in that one year.

WPB Air Branch Employees Leaving

Division, now in state of "active dissolution," will fold in August for all practical purposes.

The end of August will see the last of the War Production Board's Aircraft Division for all practical purposes. The Division at present is in a state described by its director, Henry P. Nelson, as "active dissolution."

Nelson, who is also in charge of reorganizing the automobile industry, will remain until the end of the month, but the rest of the Division's personnel are leaving. One man will remain as "caretaker" while all controls on aircraft building have been removed, he will be a safety factor in case



Phillips Hails a Famous Highway



It's The Silver Anniversary of the Main Line Airway—Flown by United Air Lines

TWENTY-FIVE years ago this month a new, amazingly important U. S. highway came into being—the nation's first coast-to-coast air route, now the Main Line Airway of United Air Lines!

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and United was the first airline to develop and use three-mile-a-minute jet-engine aircraft.

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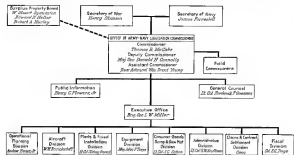
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ORGANIZATION CHART—OFFICE OF ARMY-NAVY LIQUIDATION COMMISSIONER



an emergency demanding priority assistance areas.

Wilder Plans—Morton Wilder, deputy director of the division, and formerly a major in the Air Corps stationed at Wright Field, will open law offices in Washington to practice administrative law. He remains with WPB on a consultant basis.

Leo Parolek, assistant to the director, is leaving, August 10, to return to his business in Lansing, Mich.; Edward A. Bolster, chief of the planning branch, who has been on leave from the Bureau of the Budget, returns to that bureau on August 15. Jean Dubuque, technical advisor, has resigned to become assistant sales manager of Beach Aircraft Corp., in Wichita. Future plans of others in the division have not been revealed.

U. S. Navy Blimp Course Completed By Brazilians

First group of foreign personnel has been graduated from the light-airship course at the Lakehurst Naval Air Station. A class of Brazilian air force officers and enlisted men were trained in operation, maintenance, and overhaul, of 100-year-built Navy blimps.

The Brazilian "field training" will be given by a U. S. blimp squadron now based in the Brazilian area. Ultimately, the Brazilians will operate their own blimps from a base near Rio de Janeiro that was constructed a number of years ago as the terminal for the dirigible service conducted across the South Atlantic by the Hindenburg and Graf Zeppelins.

AVIATION CALENDAR

August 10—Official Recognition Council Meeting, Room 400, Radio City, New York.
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Proposed Patent Rule Changes Seen Future Competition Mold

Senate suggestion would make public property of post-war inventions made by manufacturers under government development contracts; these separate studies of ownership rights under way.

Proposals for sweeping changes in patent arrangements are expected to be a prime subject of aircraft industry discussion shortly, as one of the most controversial matters of the war construction program is put before the public. Chiefly involved is the ownership of patents resulting from work on government development contracts. At present there is no fixed rule governing this point. Views revolving support to some government circles would standardize the formula and might materially affect the competitive situation after the war.

Revising Moves—At least three approaches are being made toward a general revising of the patent system, two of which are definitely connected with ownership rights when government research contracts are involved. In conjunction with the Office of Scientific Research and Development, the National Patent Planning Commission has been studying the present set-up for several years. Slated to issue a report soon is the President's Committee on the Patent System, organized by Secretary of Commerce Wallace at the direction of President Truman. **Top Trend**—Due to provoke perhaps the greatest comment and debate is S. 1297, the Kilgore-Johnson-Pepper bill for a National Science Foundation (AVIATION NEWS, July 30). Ostensibly designed to promote research, the measure would go far toward changing the entire patent philosophy.

S. 1297 is based in large part on the recent report of OSRD, however, at the advice of the Patent Planning Commission, OSRD advised that in the case of discoveries made as a result of support from the Foundation "there should certainly not be any absolute requirement that all rights . . . be assigned to the government." Contrarywise, the bill contains such a requirement, with a further provision that, subject to the discretion of the Foundation and with

no objection from the Justice Department, non-exclusive licenses would be granted royalty-free to practically all owners.

Peace Plans—Presumably this would apply to the military experimental and development contracts which the aircraft industry hopes to receive in volume in the transition period after V-J Day.

The effect would be to make public property any inventions involved out manufacturers might work out and which might have commercial application. In development contracts now negotiated with manufacturers, ownership of patents is divided according to the type of situation.

The President's committee is not expected to touch upon government vs. private ownership of patents in its report, although it may study this phase later.

Control Guarded—The patent sections of S. 1297 stem from the investigations into war mobilization conducted by the National Military Affairs Committee, headed by Sen. Harley M. Kilgore (D-W. Va.). Purpose is to reduce the danger of cartels and monopolies.

It is pointed out, however, that should a Federally-sponsored research program within the scope envisioned by the OSRD report (\$125,000,000 after five years), a great part of the U. S. industrial system eventually would be based on discoveries made under Federal grants. And should the philosophy evident in S. 1297 prevail, the government would be able to dictate the commercial production of patents even in peacetime.

Col. J. Henry Named AAF Press Director

Col. John Henry, who has been head of public relations for the Air Transport Corporation, is succeeding Col. William Westlake as director of public relations for the Army Air Forces. Colonel Westlake has been given an overseas assignment and has left the country.

Colonel Henry was with the

After the War...

WHAT THEN?

Of course there will be a healthy aviation industry. America's future security demands it. And the public will take a considerable production to meet a new peace-time demand.

But what of the tremendous plants that are geared to turn out planes in prodigious numbers? What of the DPC plants? Can the aviation industry, by and large, maintain a rate of production to justify their continuance. With perhaps exceptions the answer is obviously "no".

Conversion will mean eliminations rather than contractions

To the plane manufacturer who has been making most of his needs on his own production lines, it will mean not only making less of each part but eliminating the output of certain parts and assemblies entirely.

Other plants devoted to parts alone can make them cheaper and as efficiently.

Sub-contracting Should Increase Post-War

We expect to see a marked increase in sub-

contract practice post-war . . . and particularly in those industries that have leaped to mammoth size during the war. For much of the expanded plant facilities will be sold for other purposes.

Let Lewyt Do It

During the war, we've been making parts and assemblies for many of America's large producers of war implements—and particularly planes. Our fabricating and assembling facilities are experienced, not only by war production . . . we've been at this sub-contracting business for OVER 50 YEARS.

We believe we have something peculiarly adapted to the needs of the aviation industry in meeting the problems of conversion to peace-time operation. At any rate it may pay you to investigate the advantages of locating the parts you find it costly to make . . . and "Let Lewyt Do It".

Write on your business stationery for 40-page book, "Let Lewyt Do It"—the story of the Lewyt organization in pictures. Lewyt Corporation, 88 Broadway, Brooklyn 11, N. Y.

Lewyt

FOR MANY YEARS 30 YEARS A CONTRACT MANUFACTURER . . . EXPERTLY EQUIPPED TO PRODUCE COMPLETE SUBSYSTEMS AND MODULAR ASSEMBLIES, COMPONENT PARTS, SUB-ASSEMBLIES AND METAL PRODUCTS, TO THE MOST EXACTING REQUIREMENTS

CONTINUE BUYING WAR BONDS

Washington Star before going on active duty in 1942. He has been with the ATC since then, except for a special assignment with Maj. Gen. Patrick Hurley. He served with the African-Middle East division and recently was special assistant to the commanding general of the European Division of ATC. Colonel Henry has just returned from the conference at Potsdam and accompanied the late President Roosevelt to several conferences.

Canadian War Surplus Agency Gets New Chief

J. H. Berry, chairman of Canada's Crown Assets Allocation Committee, has been appointed president of that country's surplus disposal agency, War Assets Corporation, it was announced by Reconstruction Minister C. D. Howe at Ottawa.

On "leave" to the Canadian government since the early days of the war, Berry was formerly an

official of General Motors of Canada and opened the Japanese plant of that company. Other governmental duties still assigned him are director-generalship of the war supplies branch of the reconstruction branch of the Department of Munitions and Supplies and vice-chairmanship of the Canadian Production Board of Munitions and Supplies.

'Grounded' Engines To 'Sell' In Canada

Aircraft engines that cannot be used for aviation in Canada, including a large number of new and little-used engines of American and British manufacture, are being offered for sale to the highest bidder by the War Assets Corp., Canadian government surplus disposal agency.

All told, some 6,000 engines are included in the lot 529 Gypsy Meyer, 282 Menasco, 3,328 Chevrolet Mark IX, 1,686 Chevrolet Mark X, 843 Jacobs L4, 127 Pegasus II,

B-32 In Action

Cloudiness surrounding the future of the B-32 is partially cleared with the announcement that the AAF's newest bomber is now in action with General George C. Kenney's Far East Air Forces. While that still leaves uncertain the precise part to be taken by the plane, it gives an opportunity to prove itself in combat.

The War Department statement revealing that the aircraft is in use, stressed that it was especially designed for the Pacific, being able to carry "possible bomb loads for long distances at speeds exceeding 300 mph."

► **Crews**—The first crews to put the plane in action were former Liberator crew members, whose training began last February. Training today and is being undertaken at the Fort Worth Army Air Field by the AAF Training Command. This is the first time a new type of aircraft was assigned directly to the Training Command before it was assigned to operational practice. Previously, the first planes delivered were sent to one of the training air forces.

17 February 50, seven Mercury II, 34 Pegasus XII, 508 Merlin II, III and V and 14 Merlin 24.

► **AAF Sale**—These are the first pieces of surplus aircraft equipment being sold through Canadian newspaper advertising, in which the War Assets Corp. states that these engines have been received from the Royal Canadian Air Force and are not eligible for Transport Department license for use in aircraft. The engines are to be sold to the highest bidder for whatever use may be made of them—except for aviation.

WAC officials at Toronto were vague when asked if parts from these engines would be allowed for use in similar aircraft engines, or if the engines in good condition could be used in aircraft outside Canada. Many of the engines, especially Menasco, are new, and others have been but slightly used.

Calif., AAF Projects

Contracts have been let for the construction of \$2,350,000 of additions to facilities of the Pacific Overseas Air Technical Service Command at installations in Alameda and Berkeley, Calif.

Brig. Gen. William E. Farthing,

this can prevent this

this





features of this

AIRADIO

(INCORPORATED - STANTON, CONNECTICUT)



PRODUCTS OF RESEARCH...BRIEF...REFERENCE

Calif. Aircraft Test Group Formed

Organization of Aircraft Testing Co., Beverly Hills, Calif., sprang into the midst of Southern California's aircraft industry as agency intended to support the

Aircraft Corp. and began his industrial career, after flying as an Army pilot in World War I, as general sales manager for Curtiss.

Rogers was business manager of Stevens Aircraft's experimental division from 1943 to 1944, and subsequently manufactured radio-controlled glide bombs. Pappas, recently an experimental test pilot for Northrop Aircraft Company, is internationally famous as a precision aerobatics pilot. He was a Captain of the Royal Australian Air Force during World War I and later advancing engineering test pilot for the Australian government.

► **Business Field**—Devine believes that the bulk of the company's business will be in contracting with companies already well-staffed with pilots and engineers.

He also anticipates that the company will relieve many small manufacturers of the expense of maintaining their own organizations for the testing of new aircraft, engines, propellers, instruments and accessories. He says that one West Coast manufacturer, whose surplus has been under test for licensing, has asked the company to arrange flight demonstrations for prospective dealers. The company also makes inspections for finance companies engaged in aircraft financing.



J. F. Devine

testing organizations of established manufacturers.

Heading the company are J. P. Devine, president and general manager; Alex Pappas, vice-president and chief research pilot; and T. D. Rogers, secretary. Each has been independently prominent in the aircraft industry.

► **Careers**—Devine formerly was executive vice-president of Titan

Airadio's Two-way is the safe, light way to keep your planes out of dangerous weather...

Only a dead end dumb plane... one without two way radio... would blunder into a low spiral. Give your plane the protection of Airadio's Two-way dependable communication. It's what you get!

1. Extremely light weight... involves no counter and power supply weigh less than 14 pounds combined.
2. Superior radio range, weather (clouds), atmosphere and stands at broadcast reception.
3. Seen easily like... the panel mounting is actually larger than a pump postcard.
4. Easy operation... only two switches and one tuning dial.

Write today for your demonstration of the lightest of dependable two way radios... Airadio's Two way

commanding general of PDAFSG, and work on some of the projects has already started. The expansion of the activities of the ATSC on the Pacific Coast will be completed in work at the earliest possible date.

Overseas Surplus Unit Duties Listed

Disposal of surplus aircraft overseas officially became the responsibility of the Office of Army-Navy Liquidation Commissioner on August 1.

A nucleus of personnel has been transferred from the aircraft divisions of the Foreign Economic Administration. Wilbur Rentscher, head of the division and Robert McCluskey will be deputy.

The division is to receive inventory of aircraft components, and certain designated aeronautical supplies, airports, and aircraft plants, after such property has been declared surplus. In addition the division acts as export arm of the Reconstruction Finance Corp.

Functions of the individual branches are:

► **Acquisition Branch** will maintain records of surplus aircraft and related items in all theaters and determine whether planes are salable or should be scrapped.

Under this branch are Stock Control Section, which will have a case history on each surplus aircraft or major component; Appraisal and Pricing Section, Warehousing and Shipping Section, and Publications Section which will prepare catalogues of surplus stocks.

► **Administrative Branch** will perform office services.

► **Operations Control Branch** supervises Training Section, responsible for field personnel; Procedure Section, which will write procedures for acquisition, storage, guarding, sales and delivery; Flight Operations Section, which selects aircraft, arranges for procurement of overhaul and conversion, and Technical Advisory Section.

► **Disposal Branch** has charge of the work of the Aircraft Sales Section, Market Survey Section, Components and Equipment Section, and Special Programs Section, which develops and executes special programs for sales which may be made to flying clubs, government-owned or privately-owned flying schools, foreign air forces or foreign educational institutions.

Final Flying Fort Marks Era's End

The final B-17 Flying Fortress—No. 12,711—has been turned over to the Army Air Force.

This Boeing designed aircraft has been built by three major West Coast companies: Boeing, Douglas, and Lockheed, who continued forces to turn out the record number of Fortresses which have been in the thick of the air war in Europe and the Pacific from the earliest days of hostilities.

Lockheed's East-Lockhead built the wind-up plane, its 2,750th, Douglas, at its Long Beach plant, sent 3,000 Flying Fortresses from the production lines, completing its last on July 12. Boeing, which developed the design and built the first—4,961 ended its production in April to concentrate on its B-29 Superfortress.

The three companies joined their industrial skill and productive capacity in July, 1941. This production pool was one of the first examples of industrial teamwork.

Jet Tunnel

A method of testing new propulsion engines at speeds up to the equivalent of 2,000 mph was announced last week by the National Advisory Committee for Aeronautics. Consisting of a supersonic wind tunnel, it has been in use at NACA's Cleveland research center for some time.

While many aerodynamic engineers have been predicting that turbo jet engines will predominate in post-war aircraft, they have been handicapped in designing because the contemplated jet engines must handle such great amounts of air, and at such high speeds, as to create new air flow problems.

► **Safe Means**—NACA declares its new supersonic tunnel provides the only means of determining the requirements for design and operation of the future power plants.

The tunnel has a cross-section of two and one-quarter square feet. A model propulsion device is mounted so as to measure the aerodynamic forces on it as well as its own thrust.

Another supersonic wind tunnel, circular in cross-section, is now being prepared for operation.

the Aircraft War Production Council pointed out, in which three prime contractors, and thousands of subcontractors, worked as one organization to fill the needs for bombers.

During the peak period of Fortress deliveries, more than 250,000 men and women were employed in the B-17 program, including the workers building the Wright engines which power the plane, and hundreds of sub-assemblies and parts.

► **New Deal**—Newest aircraft production pool is the new, B-29 joint program, in which Boeing Superfortresses are being from the factories of Boeing at Seattle-Boeing and Wichita, Bell in Georgia, and Martin in Nebraska.

RFC Resignation Increase Forecast

Long-pending and rumored personnel changes in the upper level of Reconstruction Finance Corporation's Office of Surplus Property seem nearer, following the resignation of Edward L. Trayler as assistant chief of the aircraft division.

While the official explanation of Trayler's quitting is that he desired to get back to his private business published reports quoted him as saying he had no idea of his future plans.

► **Polly Fills**—Whether Trayler's resignation, and others that may follow, is due to dissatisfaction with RFC surplus disposal policies is a subject of debate. However, it is no secret that RFC officials are regarded as being some of their key men. Col. Curtis W. Henfield, former chief of the sales section, is temporarily filling Trayler's vacant post. He, too, will return to private business as soon as a permanent replacement can be obtained.

► **Man A. Klingbaum**, executive director of the Office of Surplus Property, last week moved over to the White House as assistant to the new war mobilization and reconstruction chief, John Snyder. His successor, George E. Burke, is likewise temporary, functioning with the title of acting director.

RFC's biggest problem at the moment is personnel. As the surplus inventory grows, additional help is needed, but officials complain that the work demands persons of special abilities. Efforts to draw on other Government departments have been unsuccessful.



Investigating the grain structure of a metallurgical subject, magnified 200 times.

Arming radio for war

MODERN ORIGNAL WARFARE has subjected radio communication equipment to hitherto unheard-of fumes of poisonhood. Not the least of these are extremes of shock and vibration, the enormous acceleration of high-powered aircraft take-offs and the abrupt decelerations of carrier landings.

Such service requires not only a high degree of confidence in design and fabrication, but also an efficient amount of research in the field of available materials and their behavior under varying conditions.

Collins chemical and metallurgical research has

played a very important part in developing the Collins communication transmitters and receivers which have proved so trustworthy in military service. The result of continuing research will be reflected in the Collins equipment available to commercial users after the war. Collins Radio Company, Cedar Rapids, Iowa, 11 West 42nd Street, New York 18, N. Y.



IN RADIO COMMUNICATIONS, IT'S . . .

Surplus Warplanes Jam RFC Depots

Sales drag as only 538 of 4,671 planes stored in Southern California and Arizona find buyers.

Just "orchards" of warplanes at five Southern California and Arizona RFC disposal centers reflect the efforts of the government to market its growing crop of surplus aircraft.

Results of sales to date are not promising, the RFC's Los Angeles agency records showing the acquisition, since last August, of 4,671 aircraft, which cost the government \$342,912,112, and the sale of 538 planes for a total of \$831,112. An additional 461 planes are shown to have been transferred, presumably to meet prospective orders in other regions.

Want A Balloon?

If anybody wants a surplus balloon, the RFC has 284 of them which have been declared surplus and are for sale. While the balloons may have little further use as such, the material has been found suitable for purposes such as emergency, floating for boats and trailers, tents, tarpaulins, sheltering for troops and home use, sports, and generally wherever a light weight waterproof covering is required.

Size Choice—The balloons, which once floated over war zones and defense areas, are in two sizes, the greater in one consisting of 751 square yards and the other 461 square yards. They are being sold at \$1 per square yard. No odd lot sales will be sold. The buyer has to take the whole balloon.



Desert Sports Airplane Orchard: Big, but not the biggest, is this "orchard" of RFC surplus warplanes for sale at Wickburg, Ariz.

Reclamation—George M. Andrews, chief of the RFC surplus aircraft agency at Los Angeles, is hopeful, however, that a reclamation project now being started at Ontario and Blythe, Calif., in which fighters and war weary bombers will be salvaged for saleable engines and accessories, will begin a gradual reduction of the area's surplus stockpile.

Most congested of the western surplus bases is Ontario, near Los Angeles, which has on hand more than 1,800 aircraft of all descriptions. Latest reports show the Blythe base to have 377 planes, Hercules, Calif., 27 planes, Phoenix, Ariz., 236 planes, and Schwanitz Field, Wickburg, Ariz., 699, planes.

The Los Angeles agency reports a cost of \$5 per month per plane, covering storage, processing, and sales costs.

Alaska Air Pioneer Killed

Art Shonbeck, credited with having financed the first airplane brought into Alaska many years ago, was killed in an automobile accident at Ogish, Alaska, recently. A mixer companion, John Benton, also was killed. Their bodies were returned to McGrath from the scene of the accident by an Alaska Airlines plane.



They Sit, Awaiting Buyers: Arizona's dramatic mountains provide a backdrop for the display of RFC surplus planes at Wickburg's Eckerman Field. Ryan trainers are in the foreground.

First Wright Plane Remains In Britain

Smithsonian hopes to get historic ship designed by ancestor it will stay abroad at least another year.

Orrville Wright expects the Wright Brothers' Kitty Hawk plane of 1903, the first powered heavier-than-air craft to fly, to remain in England probably at least another year, *Aviation News* has learned.

Reports were current in Washington recently that the plane was already on its way back or would be brought back once for display in the Smithsonian Institution as a visible evidence of the end of the old controversy between the Wright Brothers and the Lillandties.

No Change—In Dayton, however, Orrville Wright told *Aviation News* he had failed to obtain to substantiate the plane's return from the South Kensington museum, where it has been on loan since 1923.

"I do not think it has been removed from the bomb-proof underground shelter where it was placed during the German air raids," he said.

It is understood the Kensington mission has been damaged by bombs both raids, and that it probably will not be ready to exhibit the plane again until repairs are completed. It is also understood that the museum has asked permission to exhibit the plane again in England, for about one month before its return to this country, and it is probable that this will be arranged.

Museum Attains—Dr. Wetmore said that the Smithsonian would like very much to have the privilege of exhibiting the Wright plane, but that he had received no word of any definite date when it would be returned.

Orrville Wright loaned the plane to the South Kensington museum as a quietly effective rebuttal to



Champion - on Every Count

The next challenge in air transportation is to cut more revenue dollars from transportation. And the champion is it, the Cyclone 9 is ready to match its power and economy against the field.

To operators who must star in the black to stay in business, the Cyclone 9 offers two things: First, the power and mechanical performance necessary for airline operation. Second, economy—in the form of extra power per pound, more value per maintenance dollar and more miles per gallon of fuel. These qualities come from the 18 years of flight

and research and refinement which have made the Cyclone 9 the most highly developed aircraft engine in the world. Only by considering this power performance with economy could the Cyclone 9 have become a major airline engine and the greatest source of power for four-engineled bombers.

Now, with a sharp increase in power and with added refinements for greater economy and improved operation, the Cyclone 9 is available for the new types of planes which will bring about true mass transportation by air.

Backbone of Business

An interpretation of business will demand many types of planes, boats, trucks and transportation. Put the backbone of the fleet into the Cyclone 9 and the transport, carrying goods and passengers, direct distances quickly and economically. In this field, the Cyclone 9 is considered as a source of power.

WRIGHT
AIRCRAFT ENGINES
DIVISION OF
CURTIS & WRIGHT
Ft. Worth, Texas

Carrier War and the Breeze Cartridge Engine Starter

"To start the engine of an F4F fighter, you don't press the button of an automobile type starter (that would be too heavy), and you don't spin the prop by hand in the World War I (for now would be strong enough to turn it) instead you insert a little explosive charge which looks like a old gas cartridge in a firing mechanism under the engine, then close it like this: The pilot in his cockpit simply presses an electric button, the cartridge fires like a pistol, and the resulting gas turns over the engine".

—(in) **CARRIER WAR**, by Lt. Oliver Johnson, Glenn and Schaefer 1940, U.S.N.R.



Electrically fired cartridge drives down blow ing piston into chamber

Increasing pressure on piston area drives gas through hollow shaft

Choke cone engine starts spinning piston gas is starting engine

Manufactured under Carlson patent

• The Breeze Cartridge Engine Starter is familiar equipment on the hard-hitting carrier squadrons of the U.S. Navy. Providing a quick, dependable means of starting the most powerful aircraft engines, this starter has built up an enviable service record in all theaters of warfare. Operating on the spiral drive principle, as illustrated above, the lightweight Cartridge Starter smoothly transforms the 30-ton thrust of the fuel charge into crankshaft torque. The various models of the Cartridge Starter now in service are designed to spin into instant life engines ranging from 100 to more than 3000 horsepower.

BREEZE

Corporations Inc.

NEWARK 7, NEW JERSEY

the official national aviation of the United States, because the Institution had called another airplane "the first plane capable of flight".

Repeatedly, in documents published by the Institution and widely reprinted by newspapers and history books, the statement was made or implied, that the Langley Aerodrome of 1903, which made the second of two successful attempts to fly only a few weeks before the Wright Kitty Hawk flights, was the first plane capable of flight. This claim was based on later flights made in 1914 by Glenn Curtiss in the rebuilt Aerodrome.

Wright Proof—However, Orville Wright submitted detailed engineering evidence to show that the 1914 rebuilt plane was materially altered from the original design, to use aerodynamic principles not known to Samuel P. Langley, inventor of the Aerodrome, and that these changes were what made the flight possible.

In 1952, Dr. Charles G. Abbot, then secretary of the Smithsonian, published a belated retraction, accepting the fact of changes as demanded by Wright, and expressing regret for previous "acts and admissions of former Smithsonian officials that may have been misleading or are held to be detrimental to the Wrights".

Meanwhile another point presents itself. If the Wright plane were brought back, where can it be placed? Current Smithsonian quarters housing aircraft exhibits are inadequate and crowded. There is some feeling in aviation circles that a new aviation building of the national museum should be constructed to display the Wright plane and other aviation exhibits more suitably.—A. McR.

Army Commandos Moved To Ground 'Classroom'

Anchored upon steel columns at Bolling Air Force Base, Md., a C-46 Commando soon will become a non-flying Army classroom.

Grand Central Airport Co., Glendale, Calif., has received a contract to modify the airplane for students. In the passenger cabin a panel will duplicate the readings of all instruments in the pilot's compartment. Also, there will be instruments by which the instructor can set up flight abnormalities on the pilot's instrument panel to test the responses of student pilots.



BRITISH TWIN-ENGINE JET FIGHTER:

Gloster Meteor, first Allied jet-propelled aircraft to go into action, was first flown in March, 1940, in active against the V-1 flying bombs, scoring its first "kill" in August, 1944. Top, a Meteor being serviced on a Continental Airport, below, close-up view shows arrester clearing one of the four 20 mm. cannon cannons.



Air Troop Carriers Join Redeployment

Troop Carrier Command force assigned ATC in Europe's greatest air transport operation since war.

Fifteen thousand veterans of the airborne invasions of Europe—pilots, crewmen, and ground crew of the Troop Carrier Command—have been assigned with their planes to the Air Transport Command to assist in the redeployment program.

Volume traffic is now being situated in the redeployment program, but it is not expected to reach full proportions until August. By then it will have reached a level never before attained in air operations of any kind.

Short Periods—Operating mainly C-54's, the TCC units will be used on shorter portions of the long troop pipeline—in Africa, Italy, and northern Europe and

from Trinidad north to Miami and from northern fields into LaGuardia. C-54's and C-46's will be used for the long overwater hops.

The northern route will be kept filled to capacity during the summer months, switching gradually to the southern operation as winter weather closes in on the North Atlantic. ATC sources expect, however, that even during the summer period while the North Atlantic route is in full operation that the southern segment will handle the bulk of the traffic.

Planes will rarely be docked back to Europe or Africa, since regular ATC cargo and personnel operations will be maintained during the redeployment period, particularly on cargo and men destined for European occupation forces and the increasing volume available for China and India. In addition to the redeployment operation, hospital plane service is also being maintained at peak levels, both into the country and in distributing patients here.

New High Flash Aviation Fuel Confirmed As Safe, Economical

Standard Oil of New Jersey development revealed by government as having passed tests in transport engines called safe as kerosene, still retains combustion power equal to fast vaporizing gasoline.

Efficiency and safety of high flash gasoline, announced by Standard Oil of New Jersey and Pan American Airways last week after tests in large transport type engines by Wright Aeronautical Corporation at Paterson, N. J., are confirmed by government and industry aviation fuel authorities.

The joint statement mentioned that direct fuel injection must be used rather than carburetion.

Design Delays—Various low vaporization (high flash) fuels have been successfully tested for years, but their volume use has been prevented by the dissatisfaction of American designers to shift to fuel injection. Injection systems are popular in Europe, and they reportedly work all right. Their can lineages, pumps, delivery metering devices, and high tolerance fittings,

however, create many manufacturing and operating problems.

Injected gasoline is ignited by spark plugs and the head pressure is about the same as in carburetion, whereas injected diesel oil is spontaneously ignited by very high head pressures.

Standard Oil and industry authorities expect early use of safety fuel in commercial air operations at reasonable cost. E. B. Murphey, SOGJ vice-president, said that the fuel is as safe as kerosene but retains combustion power equal to the best fast-vaporizing gasoline.

Fast-Fuel Factor—The demonstrated fuel was heated to more than 100 degrees F. before it produced enough vapor to ignite. Thus, danger of flash fire are greatly reduced in handling gasoline, and, though the statement

does not mention it, non-flammability will be very important in connection with plane crashes and post-war air safety.

Army and Navy, of course, would like to have high flash gasoline but they will not get it in this war, mainly for two reasons:

► Component materials are not in sufficient supply to permit volume production now or in the early future.

► Whereas the danger in commercial aviation is gasoline outside of airplane fuel tanks, in military airplanes gas in tanks is also dangerous because of exposure to incendiary bullets.

The vapor from present high octane gasoline, in the space above the liquid in airplane tanks, is frequently too rich to burn—it doesn't have enough oxygen. Bullets can pass through it without causing fire or explosion.

But, a fuel of lower vaporization, similar to the safety fuel just tested, might produce just the right mixture in the tank above the liquid to cause a violent explosion. If the vaporization were still lower, the mixture might be too lean to be ignited by bullets.

Military Research—It is quite probable, military experts told Aviation News, that further research will develop a fuel that will be much safer than present fuels for naval aviation. No doubt was expressed about the future availability of component materials, whose production has been augmented by the war.

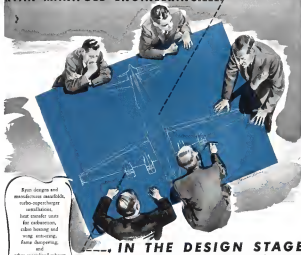
On aircraft carriers the problems are multiplied. Gasoline spilled by accidents and hits by the enemy is the cause of enormous damage and loss of life. But the gasoline in the tanks of airplanes on the deck are exposed to enemy fire also, thus creating a paradoxical requirement.

Present high flash "safety" gasoline is used by the Navy for testing storage tanks, fuel lines, and pumps on carriers, with no danger resulting from spills and leaks.

Fast Fuel—Army, Navy and the National Advisory Committee for Aeronautics have made extensive experiments with high flash fuels produced by Standard Oil and other companies since the middle 1930's. Lack of fuel injection technology and practice is the main reason why the country went to war with highly volatile gas in its airplane tanks.

Increasing application of jet, gas turbine, and rocket power will bring a relative decline in safety problems of fuel for piston engines.

RYAN MANIFOLD ENGINEERING



Ryan designs and manufactures manifold, turbo-supercharger installations, heat exchanger units for exhaust, cabin heating and wing de-icing, flame dampers, and other specialized exhaust system applications.

IN THE DESIGN STAGE means lower weight, better performance

To place the exhaust manifold system when the original design for the airplane is being made saves costly engineering time, brings reduction in weight, and results in better performance. In a typical instance a Ryan manifold design saved forty-eight pounds in the weight of a military transport plane.

By planning with Ryan during the design stage, the type of manifold system and installation best suited to your specific requirements can be readily determined.

Whether planning to use Ryan ball and socket type or slip-joint type manifolds, let Ryan work with you in the design stage. You will obtain a superior product and maximum performance, and, in wartime, lower weight in peacetime, lower payload.



RYAN

RELY ON RYAN TO

BUILD WELL 1932-1945

Ryan Aeronautical Company, San Diego—Hawthorne, Alhambra, New Production Council, Inc.

DESIGNERS AND BUILDERS OF NAVY FIGHTING PLANE AND EXHAUST MANIFOLD SYSTEMS

AVIATION NEWS • August 6, 1945



New Fuel Demonstrated: High octane gasoline floating upon water, in the glass at left, blazes as its vapors burn when a lighted taper is held above it. However, when the taper is shoved into the glass on the right, containing safety high octane aviation fuel developed by Standard Oil Co. (M. J.), no fire occurs.

KOPPERS

and Aviation

PRESTRESS-TREATED PILING SUPPORTS RUNWAYS ON UNSTABLE SOIL

When the runways had to be extended at this Eastern airport, swamps had to be drained and the ground made stable to avoid settling under the weight of heavy planes. Prestress-treated wood piling was selected. Treated wood piling is used under hundreds of large buildings, bridges, piers and other structures. Koppers Wood Preserving Division prescribes piling in plants strategically located throughout the nation.



AIRPORT SURFACES THAT ARE RESILIENT

Airport runways, aprons, parking areas and other surfaces can be paved economically with Koppers Tarcrete and Tux. Tarcrete is particularly well adapted to aprons and other surfaces because it is not affected by oil or gasoline droppings.



RIMS WITH DOUBLE STRENGTH

Engineers of Koppers' American Hummer Division have produced airplane plans rims with double the tensile strength of any previously developed. The patent P.O.B.U.-K.H.D.M.P. Process, has resulted in a revolutionary reduction in weight and cylinder wear and has eliminated ring seating.

KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRIES

KOPPERS COMPANY, INC., PITTSBURGH 19, PA.

BUY WAR BONDS... AND KEEP THEM

AVIATION NEWS • August 6, 1943

French Air Industry Warned "Do Better"

The French aircraft manufacturing industry, now owned by the government, will have to pay its own way, and better, to stay in the industrial running.

Charles Tillon, France's aviation minister, is reported, in dispatches from ahead, to have said that he will close down the national factories if they cannot do better than private industry.

"No Incentive" — "An industry which enjoys a monopoly is doomed to failure at the outset, since it does not have to worry about competition," he said, and added that the trouble with monopolies, such as nationalized industry, is that they have no incentive to invent newer and better ways of producing.

The Aviation Minister said that the five national airplane factories in France were taken over not only because their owners were incompetent, in his opinion, but because they collaborated with the Nazis. He added that anyone who wants to build airplanes has his blessing.

1,000th Masquito

The 1,000th Masquito plane to come off the assembly line at De Havilland Aircraft of Canada, Toronto, was recently test-flown. More advanced models of the all-



CONSTELLATION LINE

Start of a fleet of Lockheed C-69 Constellation transports is shown in this production line picture marking "limited production" of the "Constellation." These are the planes originally ordered by Transcontinental & Western Air, Inc., and Pan American Airways System. They have secured their order rights for the year's duration. Post-war Constellations will carry 20 to 64 passengers in various ranges in addition to a crew of six.

wooden aircraft are now being produced at the Toronto plant, with sub-assemblies being made at a variety of plants across Canada. Masquito production includes bombers, bomber-lighters, reconnaissance and photography planes.

Dutch Fokker Plants Face Hard Restoration

The Fokker aircraft plants near Amsterdam, founded many years ago by the widely-known Dutch engineer, A. H. G. Fokker, who died in New York in 1939, are still suffering from the devastating effects of Nazi vandalism.

The Netherlands Information Bureau reports that machinery, technical installations, and equipment were torn out of the plants and sent to Germany. Consequently, prospects for producing planes are small for some time to come, unless officials are permitted to re-equip the factories with material and machinery from German Fokker plants. Sufficient technicians and engineers are available to start production as soon as equipment is available. Until that time, however, Fokker officials will try to restore some plants sufficiently to permit essential repairs on aircraft.



NEXT, NIPPON

Shown as a final shipping conveyor at General Electric's Erie, Penn., plant are gun turrets slated to arm B-23 Superfortresses for their deadly work on the skies above Japan. Four turrets, such as those shown, plus a fifth for the tail gun emplacement, are the "strong" armors for the big bomber. The remote control fire system, by which the turrets function, allows more than 20 different firing positions to "nap the Jap."

RFC Takes Bell Plant

The Bell Aircraft plant at Elmwood, N. Y., near Buffalo, has been leased by the RFC as a center for

AVIATION NEWS • August 6, 1943

PRODUCTION • 25

WHAT'S YOUR BRAKING PROBLEM?

WEIGHT?

SPACE?

POWER?

Today's multiplicity of airplane types — all of them differing in landing speed, wing loading and service — call for highly specialized braking equipment.

Meeting this need, Goodyear offers a complete line of aircraft brakes, each type unsurpassed for its particular requirements — because each is an outgrowth of Goodyear's extensive tire-wheel-brake experience dating back to the earliest days of aviation.

Pioneer of the service-proved disc-type brake for planes, Goodyear makes both Multiple Disc and Self-Adjusting Single Disc Brakes which have a multi-billion-mile record of safety and dependability — serving in all parts of the world on all types of planes, from light trainers through

fast fighters to heavy superfortresses and transports, both military and airline.

Goodyear Multiple Disc and Single Disc Brakes are distinguished by their simplicity of design, ruggedness of construction, ease of installation, powerful smoothness in action and longer life with minimum servicing.

These are the features that help solve weight, space, power and other problems that confront designers and builders of aircraft. The desired performance of your new plane will determine whether multiple or single disc brakes should be specified. Consult Goodyear on this or any other landing gear problem involving brakes, wheels, tires — you'll find it helpful, as others have. Just write Goodyear, Aeronautics Department, Akron 36, Ohio or Los Angeles 54, California.



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TREAD TIRE

Single Disc Brake
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TREAD TIRE

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PERSONNEL

274 Names Blair-Smith Assistant To Treasurer

Delbert Blair-Smith, public accountant and tax specialist, has been named assistant treasurer and general of Transcontinental and Western Air. Blair-Smith will assist treasurer John B. Thompson. He was formerly associated with Lybrand, Ross, Ross, and Montgomery in New York City. He was one of the editors of Montgomery's annual 2,000-page book, Federal Taxes on Corporations.

NWA Administrative Post Assigned L. C. Glotzbach

Lawrence C. Glotzbach, personnel director of Northwest Airlines, has been added to the company's general administrative staff as executive assistant to the president and general manager. Glotzbach was formerly associated with the Federal Works Agency as director of region seven.

E. G. Louder (photo) has been made vice-president in charge of all branches of Pacific Air Lines Corp., Glendale, Calif. He entered the commercial aviation field with Broadway Railroad Aeroplane Corp. in 1930, and served until joining Pacific Air Lines in 1935. He will be in charge of the company's bases in Anchorage, Seattle, Oakland, Glendale, Portland, San Diego, and Kansas City, where they maintain repair facilities for servicing aircraft engines.

Henry H. Hart has been elected assistant to the president of Southwestern Air Express, Inc., to conduct a survey of airport and local air facilities in southwestern communities the company plans to serve with

feeder service. Hart formerly was manager of an Air Forces Primary Flight school at Jackson, Tenn.

F. F. Robinson Elected To Bell Aircraft Board

Frederick F. Robinson, president of National Aviation Corp., has been elected to the board of directors of Bell Aircraft Corp. First associated with National Aviation in 1942, Robinson became acting president in 1943 and was elected president in 1945. He served as deputy administrator of the NRA in 1943 and 1944. He is also assistant to the president of the Libby-Owens-Ford Glass Co.

Arthur W. Jazwina has been named superintendent of merchandising for United Air Lines. Jazwina joined United in 1943. He will supervise the department of sales aids, employee sales promotion presentation, and will work closely with the company's advertising department in preparation of sales presentation literature.

Howard Kennedy has been promoted from Washington regional traffic manager for PCA to assistant to Vice-President J. J. O'Donoghue. Kennedy has been associated with PCA since 1932 and served as traffic representative in Detroit, Chicago, and being transferred to Washington in 1941.

E. C. Michle (photo) has been appointed regional cargo traffic manager for Eastern Airlines in the western region, replacing Jack Smith, who has resigned. Michle joined American in 1933 in the traffic department and served in Chicago, Washington, and Dallas as cargo traffic manager for the southern region until his new appointment.

UAL Appoints Three New Vice-Presidents

Election of three veterans United Air Lines officials as vice-presidents



of the company, has been announced. H. E. Mooney (left), formerly assistant to the president and head of the economic and market research department, becomes vice-president in charge of economic affairs. D. F. Maguire (center), formerly director of passenger service, becomes vice-president in charge of passenger service. R. F. Alvarez (right), who was director of personnel, is now vice-president in charge of personnel.

R. F. Margrove (photo) has been appointed works manager of Consolidated Aircraft Corp's Fort Worth division, succeeding C. A. Sharpe. Margrove, formerly factory manager, joined Consolidated as manager of San Diego in 1935 and subsequently was associated with Vultee Aircraft, Inc., before Consolidated and Vultee merged.

John A. Hart, Jr. (right) has been appointed secretary of the Judicial



of Aviation Corp., and Vincent F. Dulak (left) has been named treasurer of the company. Hart, who is also assistant to the president, joined the corporation in January after his release from the Army Air Forces. Dulak has been assistant to the secretary-treasurer.

Elph W. Starkey has joined PCA in the newly created post of director of cargo sales. Starkey is a veteran executive of the Railway Express Agency.



CONTRIBUTES TO VICTORY

Motors of many types of military air carriers are being lubricated by D-X Aviation Oil. Meeting the rigid requirements of U. S. Army and Navy engineers, this superior lubricant has proved its exceptional protective qualities under combat conditions. Soon, it will be available to operators of commercial and private aircraft. Inquiries invited.

MID-CONTINENT PETROLEUM CORPORATION

TULSA, OKLAHOMA

COMMENTARY

Jap Seen Hoarding Warplanes For Final Battle Of The Pacific

Estimates place front-line air force strength at 4,000 aircraft now being carefully sheltered from attack, even to extent of flying away from raid areas; production badly disorganized.

A recent Tokyo broadcast indicated that Japan was conserving her air power for the "last and final battle to be fought." There is increasing evidence that this is the real intention.

According to their own spokesmen the battle of Okinawa was the beginning of the battle of Japan.

► **The Remains**—Despite the loss of what General Kuroki termed a "usable air force" in the Philippines (over 10,000 aircraft were lost between September 1, 1945 and March 1, 1946, including operational losses and those destroyed in the air and on the ground by Army, Navy and Marine air force pilots), the Japanese had between 4,200 and 4,500 first-line fighters and bombers at the start of the Okinawa campaign.

Aircraft production in early 1945 was at its peak of over 2,300 per month of all types. The big Superfortresses which began in March have since reduced this figure to 1,348 or 1,466 per month. During March, April, and May the enemy lost a total of more than 5,000 aircraft, with many damaging totals of between 300 and 320 planes destroyed.

► **Okinawa Cause**—Early in June, however, the Jap warplanes were forced to write off Okinawa, and the aircraft hoarding policy went into effect. Daily sorties were suspended in daytime and resumed rather than hundreds, bad weather also helped to keep the attacks down. In any case enemy losses from all causes averaged only 48 planes per day, or about 1,200 for the month of June, the lowest total for more than a year. Early estimates indicate that Jap aircraft losses for July will be less than the June figure. Thus, Rear Admiral Ramsey, deputy air com-

mander for the western Pacific, reported that as of July 1 the Jap Air Force could muster a total first-line strength of some 4,000 aircraft, a few hundred less than at the opening of the all-out defense of Okinawa.

Estimates indicate a figure approaching 5,000 as of August 1, including combat types used in training. Over 30 percent of these are fighters. With the withdrawal of aircraft from South China and other fronts not regarded as part of the inner citadel, this amounts to a concentrated and potentially formidable air force to be thrown against an invasion attempt by American forces, assuming that even 90 percent are operational at any given time.

► **Next Example**—However, it may prove to be the story of the outboard and outboarded Luftwaffe all over again, forced to pass up the jacked targets in history on D-Day because of the overwhelming Allied air superiority over the English channel and the Normandy beachhead.

The Jap Air Force may refuse to come out. On the other hand, to gain the maximum effect, every plane may become a piloted flying bomb.

During the past two or three months constant attention has been paid by AAF Thunderbolts and Mustangs and Marine Corsairs to fast, powerful fighter-bomber sweeps over the airfields on Iloilo and Kyushu, passed on occasion by fighters and dive bombers from Fast Carrier Task Forces 1 & 2.

► **Ras, Ras, Ras**—Hundreds of planes on the ground have been shut up in this way, and recently, to avoid this, enemy airplanes, alerted by their early warning radar, have taken off and made

themselves scarce in the vicinity of air bases.

Thus, coupled with a policy of wide dispersal on air strips far removed from the main bases is another evidence of aircraft hoarding.

Tokyo radio has claimed that new fighters would soon be in the air to attack the B-29's and that underground plants were producing scores of such planes every month. Superfortress crews have been reporting occasional sightings of what appears to be a considerably improved version of the 4-year-old Army twin-engine fighter Nick.

► **Something New**—It is now believed that this is a new model altogether, resembling Nick, but of greatly superior performance in speed, climb and ceiling—on the 400 mph. class and effective up to 34,000 ft.

It has a new gun installation of one 37-mm. Browning type cannon, in addition to several 20-mm. cannon and 12.7-mm. machine guns. It may or may not have a turbo-supercharger in connection with its 18-cylinder air-cooled engine, but there are increasing reports that the Japanese have been testing turbo on many of their new aircraft in the light of the highly successful experience of this type of supercharger on many American fighters and bombers.

NAVIGATOR

Eight Army Divisions Flown Across Atlantic

Edict of the department of transport movement by air is passed up by the War Department's report that a total of 123,376 military personnel, the equivalent of more than eight Army divisions, returned to the United States by air from the European and Mediterranean Theaters from May 1 through July 11.

Of the total actually deployed, 27,200 were flown across the Atlantic in Air Transport Command planes. The other 96,176 came back as crew members or passengers in redeployed tactical aircraft.

► **Bomber Exodus**—As of July 12, data on which latest releases are based, were completed, 3,425 heavy bombers had been flown to the United States from the two theaters. The War Department said both redeployment operations, making the greatest mass air movement of personnel and planes in aviation history, are progressing according to plan.

FAMILY PLANE COST CUT IN HALF

Taylorcraft "Foursome" Already Flying!



BEFORE the war, 4-passenger airplanes were heavy, high-powered and costly. Prices were from \$7,500 to \$15,000 and more.

The new Taylorcraft "Foursome" costs the family plane out of this luxury price bracket for the first time in aviation history—yet provides luxury features never before obtainable in an airplane, regardless of price.

For instance: the biggest, roomiest cabin ever built into a 4-passenger plane. Electric starter—no prop spinning. Unlimited visibility—with wide windows all around and the new Taylorcraft one-piece

unspooled windshield. And performance superior to the heavy, costly prewar ships in many respects.

The instrument panel is compact and uncomplicated like the dashboard of your car, and the engine—what an engine! Light, powerful and smooth performing, it harnesses 125 horses—expert aeronautical engineers say it is the best all-around, most economical engine ever built for a 4-passenger plane.

See your local Taylorcraft dealer. He will gladly give you full particulars and tell you how convenient budget payments can be arranged.



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Today, the eight Jack & Heintz plants are turning out 36 different war products—in unending streams for the finest aircraft in the world. Our newest assignments are military secrets, but jobs we *can* talk about now are the instruments, auto pilots, generators, starters, motors and bearings that have gone to war by the tens of thousands.

This equipment is used in pursuit planes, bombers, transports, patrol boats, trainers, gliders . . . and even blimps. Its performance has been such that the Jack & Heintz nameplate is now a welcome sign of dependability to the men who gamble their lives on it daily in every corner of the globe.

From the first, Jack & Heintz has led the

way in reducing weight, boosting output and increasing service life on every job undertaken. Engineering like this has helped keep America's air fleet first in the war . . . it will be equally effective in holding that place in peace.

Watch Jack & Heintz for new things in aircraft

Jack & Heintz, Inc., Cleveland, Ohio, manufacturers of Aircraft Engines, Starters, Generators, Gyro Pilots, Gyro Flight Instruments, Magneto, Motors.



Buy More War Bonds and Stamps

Airline, Aircraft Stock Rise Reflected By Investment Review

National Aviation Corporation holdings show market value of \$10,227,891 against average cost of \$6,089,386, June 30 portfolio report reveals.

Investment portfolio of National Aviation Corporation up to June 30, 1945, shows substantial enhancement in the company's financial position through acquisition of airline and aircraft stocks during the first half of the year.

Company's holdings at June 30 had a market value of \$10,227,891 as against an average cost of \$6,089,386, while at December 31, 1944, the market value of National's portfolio was \$7,468,643.

► **Change List**—Classification of assets on June 30, 1945, and on December 31, 1944, shows the following overall change:

	June 30 1945	December 31 1944
Aircraft and Accessories	44,870	10,275
Other	1,476	1,475
Cash, U. S. Securities and Investments—Net	10,175	14,995
Total	56,921	26,745

The appreciation in National Aviation's portfolio reflects the general gains among airline and aircraft stocks during the past few months.

► **NWA**—For example, at December 31, 1944, company had 15,000 shares of Northwest Airline, Inc. common stock owned at a market value of \$473,500. At June 30, 1945, these shares had a market value of \$690,000.

► **TWA**—The 11,500 shares of Transcontinental & Western Air, Inc. common stock, which the company owned at a market value of \$537,750 at December 31, had a market value of \$881,125 June 30. Likewise, among the aircraft manufacturers, gains were substantial throughout the last.

► **Bell**—Company's 15,000 shares of Bell Aircraft Corporation common

stock, earned at \$216,375 at December 31, had a market value of \$325,500 at June 30.

► **Convair**—The 37,100 shares of Consolidated Vultee Aircraft Corporation common stock, which had a market value of \$328,176 at December 31, had a market value of \$453,242 at June 30.

National increased substantially its holdings of airline securities during the first six months. Company added to its list, among others, 4,900 shares American Airlines, Inc. common stock, 4,000 shares Pan American Airways Corporation common stock, and 7,800 shares United Air Lines, Inc. common stock. While the company disposed of 4,000 shares Bristol Airways, Inc. common stock and 3,800 shares Chicago & Southern Airlines, Inc. common stock, it added to its portfolio 2,100 shares Delta Air Corporation common stock.

Among the aircraft manufacturers, National added to its list 3,800 shares Bendix Aviation Corporation common stock, 5,000 shares Douglas Aircraft Company, Inc. common stock, and 2,600 shares Lockheed Aircraft Corporation common stock.

The accompanying tabulation compares company's portfolio at June 30, 1945 with December 31, 1944.

► **Total**—Net income of National Aviation Corporation for the six months ended June 30, 1945, amounted to \$123,791 after provision for state franchise and other taxes except federal taxes on income. Cash dividends received by the company on its investments totaled \$166,641 for the six months.

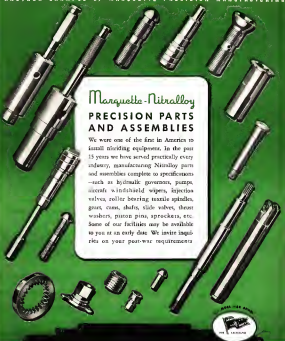
Balance sheet at June 30, 1945, showed total assets of \$7,752,848. Cash on hand amounted to \$318,484, while U. S. Government Securities were \$1,168,065.

Canadian Cwb Output Set

Canadian flying schools this week were given a definite promise of early trainer plane deliveries, as the Cwb Aircraft Corp., Hamilton, Ont., announced looking for commercial production will be completed in the near future.

Long hampered by wartime restrictions and lack of equipment, the company's flying schools were described as already placing orders for the highspeed Equipped with Continental engines, the planes will be 90 percent Canadian manufactured, according to Cwb President R. L. Gibson.

ANOTHER EXAMPLE OF MARQUETTE PRECISION MANUFACTURING



Marquette-Nitralloy PRECISION PARTS AND ASSEMBLIES

We were one of the first in America to install nitriding equipment. In the past 15 years we have served practically every industry, manufacturing Nitralloy parts and assemblies complete to specifications—such as hydraulic governor, pumps, aircraft windshield wipers, injection valves, roller bearing textile spindles, gears, cams, shafts, slide valves, thrust washers, piston pins, sprockets, etc. Some of our facilities may be available to you at an early date. We invite inquiries on your post-war requirements.



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AND COMPONENTS • PRECISION PARTS AND ASSEMBLIES

Airlines			
No. of Shares June 30, 1945	No. of Shares December 31, 1944	Company	June 30, 1945 Market Value
15,000	15,000	American Airlines, Inc.	\$690,000
1,000	1,000	Bell Aircraft Corp.	\$325,500
15,000	15,000	Consolidated Vultee Aircraft Corp.	\$453,242
4,000	4,000	Pan American Airways, Inc.	\$165,200
7,800	7,800	United Air Lines, Inc.	\$381,780
4,900	4,900	American Airlines, Inc.	\$196,100
11,500	11,500	Transcontinental & Western Air, Inc.	\$881,125
3,800	3,800	Bendix Aviation Corp.	\$154,200
5,000	5,000	Douglas Aircraft Co.	\$250,000
2,600	2,600	Lockheed Aircraft Corp.	\$104,000
11,500	11,500	Transcontinental & Western Air, Inc.	\$881,125
15,000	15,000	Bell Aircraft Corp.	\$325,500
37,100	37,100	Consolidated Vultee Aircraft Corp.	\$453,242
4,000	4,000	Pan American Airways, Inc.	\$165,200
7,800	7,800	United Air Lines, Inc.	\$381,780
4,900	4,900	American Airlines, Inc.	\$196,100
Total			\$10,227,891

Aircraft and Accessories			
No. of Shares June 30, 1945	No. of Shares December 31, 1944	Company	June 30, 1945 Market Value
15,000	15,000	American Airlines, Inc.	\$690,000
1,000	1,000	Bell Aircraft Corp.	\$325,500
15,000	15,000	Consolidated Vultee Aircraft Corp.	\$453,242
4,000	4,000	Pan American Airways, Inc.	\$165,200
7,800	7,800	United Air Lines, Inc.	\$381,780
4,900	4,900	American Airlines, Inc.	\$196,100
11,500	11,500	Transcontinental & Western Air, Inc.	\$881,125
3,800	3,800	Bendix Aviation Corp.	\$154,200
5,000	5,000	Douglas Aircraft Co.	\$250,000
2,600	2,600	Lockheed Aircraft Corp.	\$104,000
11,500	11,500	Transcontinental & Western Air, Inc.	\$881,125
15,000	15,000	Bell Aircraft Corp.	\$325,500
37,100	37,100	Consolidated Vultee Aircraft Corp.	\$453,242
4,000	4,000	Pan American Airways, Inc.	\$165,200
7,800	7,800	United Air Lines, Inc.	\$381,780
4,900	4,900	American Airlines, Inc.	\$196,100
Total			\$10,227,891

Others			
No. of Shares June 30, 1945	No. of Shares December 31, 1944	Company	June 30, 1945 Market Value
1,000	1,000	Bell Aircraft Corp.	\$325,500
1,000	1,000	Consolidated Vultee Aircraft Corp.	\$453,242
1,000	1,000	Pan American Airways, Inc.	\$165,200
1,000	1,000	United Air Lines, Inc.	\$381,780
Total			\$1,325,722

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Pistons
Piston Pins
Counterweight Check Pins
Machined Magnesium Parts
Cylinder Head Down Hubs
Hardened and Ground Parts

PARTS FOR PROPELLER ASSEMBLY

Machined Magnesium Parts
Piston Rings

EQUIPMENT FOR MAINTENANCE OF AIRCRAFT

Pistons for Oxygen
Compressor
Piston Rings for Oxygen
Compressor
Pins for Oxygen Compressor
Pistons for Air Compressor
Pins for Air Compressor
Piston Rings for Air
Compressor

LANDING GEAR PARTS

Machined Aluminum
Pistons
Piston Rings
Hardened and Ground Parts

PRIVATE FLYING

CAB's Proposed Safety Rules For Charter Flights Circulated

Affects all non-scheduled commercial operations; economic control action awaiting policy report; safety suggestions believed to parallel general regulation of scheduled air carrier.

By ALEXANDER MCSURELY

New safety regulation proposals affecting all commercial operations of non-scheduled aviation, from the local sight-seeing hop of a two-place lightplane to a transcontinental charter flight, were to be released for general circulation and comment throughout the industry, last week end or early this week.

The regulations drafted by the Civil Aeronautics Board safety bureau are not to be confused with economic regulations, which have not yet been proposed. It is understood the board is awaiting reports from members William J. Madden and Curtis Henderson on recommendations for general future policy toward non-scheduled commercial operations before determining its next move on any economic regulations.

Constant Production—While details of the proposed safety regulations have not been disclosed it is understood they would set up general safety requirements for aircraft and equipment and qualifications for pilots participating, in many respects, those now required for scheduled air carrier operation. Admitting that the new proposals "probably are not the final answer" Jesse W. Lankford, CAB safety bureau director, said last week that they were a framework on which to build a workable set of regulations.

"Until the industry can look them over and make its recommendations, there will be no action. We need a lot of help on these jobs as we did on the new private flying regulations," Lankford said.

Need Feds—While a number of operators are expected to avoid themselves of the constitutional privilege of looking about any and all regulations affecting non-transport flying, there is a feeling among some of the more responsible operators that additional

safety regulation is inevitable with the growth of commercial non-scheduled flying.

Lankford takes the position that a set of safety regulations incorporating the safety practices which the responsible operator would normally use as good business practice will serve to protect his interests against the damaging record of irresponsible flying services which otherwise might use unsafe methods resulting in accidents and covering the public faith in non-scheduled commercial flying.

Some opposition is expected from the industry group which distrusts all government regulation of a new field, on a basis of previous experience with other regulations. **Industry Guide**—Lankford, and presumably CAB, expect to be guided largely by the industry opinion on these regulations.

Many observers believe that the type of regulations to be developed will determine very definitely the success or failure of commercial non-scheduled aviation.

Pilot Poll Urges "Built-In" Safety

AOPA members divided on safety by regulation or competition, but firm on basic principle.

Emphasis on safety in personal plane design was outstanding in the replies of some 1,500 members of the Aircraft Owners and Pilots Association to a recent questionnaire proposed on aircraft design requirements.

Answering the basic questions on suggested requirements to be included in the proposed Part 19, Civil Air Regulations, most of the AOPA members voted a "right ticket" between the divergent viewpoints expressed by the Aircraft Industries Association of America and Civil Aeronautics Administration engineers as to requirements.

CAB Guide—The replies have been summarized and analyzed as a guide to the Civil Aeronautics Board in consideration of the proposed revision. It is pointed out that the cross-section of opinion from the pilots is at much more significant than a similar poll of non-fliers or "would-be" future pilots. Over 35 percent of the replies came from men who had owned more than one airplane.

Less than 5 percent of the replies supported the CAA regulatory viewpoint or the manufacturers' "safer fare" arguments on all five questions.

Analysis of these votes showed that the replies were straight endorsements of CAA policy, but it was observed that most of the CAA voters were below AOPA aver-



SEABEE'S ANCESTOR

Beginning of a development which led to the all-military Seabee Seabee, is the pleasure-and-jobs-oriented Spencer-Lester amphibian. Designed by P. M. Spencer, later employed by Republic to engineer the Seabee development, the earlier plane had a 125-hp engine, would seat two with a jump seat for a third passenger. Another version of this plane carried slender nose tail-booms from wings to horizontal tail surface.



Bellanca Crusader Bellanca Aircraft Corp.'s new four-place Crusader is being flight tested at New Castle, Del. The low-wing monoplane, equipped with retractable landing gear and triple tailfin, is powered with a 125 hp. Franklin six-cylinder engine which gives it 165 mph, top speed and 150 cruising speed. In the pre-war period Bellanca had two and three-place versions of a similar plane. The new model will sell for \$14,400, will be manufactured "in hundreds rather than thousands," company spokesman says.

age in pilot experience, while most of the relatively few members who voted "wholly for the manufacturer's viewpoint" were members of long standing and pilots of considerable experience.

Tabulation of replies by percentages showed:
■ Nature of government regulation needed: 53 percent favored manufacturers' plan for maximum regulation, 46 percent favored CAA.

CAP Status

A technical change in the status of the Civil Air Patrol, which resembles a separate national headquarters instead of making it a section under the AAF Training Command Division, was given Col. Earl Johnson, national commander, authority to issue directives on civilian phases of the CAP work.

Under this arrangement there are 41 AAF liaison officers assigned to the state wings of CAP, most of them control relations. These officers report to the Air Flying Training and Technical Training Commands and handle supply and service and medical training, but do not direct the wings, which are under jurisdiction of the national commander.

Plans are to put CAP on more of a self-sustaining basis since the 1940-41 federal appropriation amounts to only about \$3 per member per year, not enough to pay for the dues which he would not in the program, CAP headquarters permit out.

viewpoint for regulations assuming pilot that plane is such that accidents can be avoided by handling of average skill.

■ **Landing speed restriction:** 56.7 percent favored CAA proposal for restricting present 60 mph, maximum landing speed requirement on single-engine planes; 43.3 percent favored manufacturers' recommendation to abolish 65 mph restriction, and show actual stalling speed of plane on placard in airplane instead.

■ **Rate of climb:** 60.5 percent favored manufacturer view that angle of climb is more important, given a maximum safe rate of climb; 39.5 percent favored CAA's contention that any plane should have at least 500 feet per minute rate of climb.

■ **Two-engine aircraft requirement for climb with one engine out:** 65.3 percent favored CAA in proposing to guarantee multi-engine planes will continue in flight with one engine out; 15.4 percent favored manufacturers' argument that the requirement be changed to "controllable with one engine out."

■ **General policy on safety regulation of personal planes:** 52.1 percent favored the manufacturers while 47.9 percent favored CAA. Expressed policies of both sides were closely paralleled, calling for broad regulations leaving the manufacturer free to express his originality in aircraft design. Comments accompanying answers however were summarized by ACPA in the following composite:

"Keep federal regulation to a minimum, none by the states. Reg-

ulations should only set safety standards, not restrict design by becoming detailed and rigid. Regulations raise the cost of aircraft to the consumer, cause lag in applying new design and manufacturing technique to production. It is better to have an intelligent consumer group demanding better products than an outmoded and lumbering set of government regulations dictating aircraft design program."

Post-War Bellanca Is 'Luxury' Model

Four-place plane to sell as high as \$4,500; designed for steady limited market.

Describing by men who have flown it as "one of the sweetest-flying planes in the new post-war crop" the Bellanca Crusader will be of interest to buyers who are willing to pay as much as \$4,500 for a four-place aircraft.

First of the planes is undergoing flight tests at the Bellanca plant at New Castle, Del. It is not expected that Bellanca will be a competitor in the mass production field, but will probably limit its production to supply a comparatively small number of distributors, probably 50 to 80.

■ **Builder Offer:** It is reported that one distributor offered to manufacture some of the planes in the West Coast if Bellanca would license him to do so, but the offer was declined.

The standard Crusader will be equipped with a 130-hp Franklin six-cylinder engine, but more powerful engines may be had at extra cost. A new two-position hydraulically-actuated propeller will be offered as optional equipment and may be made standard.

The plane, like its pre-war counterpart will have a fabric-covered, steel tubing fuselage and wood and plywood wing.

■ **Speed Range:** Performance is estimated to include a top speed of 165 mph, cruising speed of 145 mph, and landing speed of 47 mph, with full flap. A range of 545 miles with a standard single tank, or 670 miles with a double tank arrangement is expected.

Weight empty of 1,175 pounds and gross weight of 2,100 pounds is quoted. Starter and generator are standard equipment, as are magnetic compass, airspeed indicator, altimeter, tachometer, oil and fuel pressure and temperature gauges. Provision for installation

Stars in the sky... United Mainliners



In the West
**United Air Lines flies
 on Chevron Aviation
 Gasoline**

TO SPEED essential passengers and cargoes on war-vital missions, United Air Lines' war-time schedules call for 100,000 miles of flying every day, 4000 miles on time. To help keep western Mainliners as the dot, United powers their two-row Weps with Chevron Aviation Gasoline, the fuel on many aircraft experts rate tops for dependability, power, economy.



CARGOLINERS, DC-6's converted into flying freight cars, speed shipments from coast-to-coast overnight. 480 cargo flights are now in many round-trip operations in the 17 planes in line now. Standard aviation products.



Standard and United engines use lubricants on flying fuel tanks.



"COMFORTABLE" to have as cool Mainliners before take-off is an example of United's careful attention to passenger comfort and operating efficiency. United Air Lines use of dependable flying fuel like Chevron Aviation Gasoline is another.

AVIATION CAPTAINS, not pilots, control them on every Chevron Aviation Constellation before and after every flight. By a 100 per cent pilot...Chevron will make it, too, a star in the sky.

STANDARD OF CALIFORNIA

San Francisco, Calif.

of two-way radio and radio compass at extra cost is made.

All control surfaces are fabric covered including flaps, which are operated by a lever and have maximum deflection of 45 degrees. Landing gear retracts into wells in the wings, leaving about a third of the wheel extended as a safety factor in case of a wheel-up landing.

Dominion National Airport Fund Gains Wide Support In Canada

Provincial air conference yields proposals by civic, industry, government, military, and aviation groups for government matching, dollar-for-dollar, local field programs; urge expansion of private ownership and tourist facilities.

Prepared for the Canadian government to stimulate community enterprise in building airports by providing a fund for matching local investments; evaluating the proposed national airport plan in this country; and, finally, proposals advanced by aviation groups and civic officials in Canada.

At the recent provincial air conference at Kamloops, British Columbia, attended by more than 100 representatives of industry, government, and civic organizations and the RCAF, resolutions were adopted recommending:

▶ That the Dominion and provincial governments establish a public-aid campaign to encourage towns and villages to provide their own local flying fields with the object of encouraging the Canadian people to take to the air as private citizens.

▶ That "to encourage the development of aviation and assist in the rehabilitation of our returned men" the federal government should introduce legislation, at the earliest possible date, to provide financial assistance, including dollar for dollar, in any town, municipality or community association and ready to provide a landing field or airstrip for light aircraft on a site approved by the Department of Transport.

▶ That the Provincial government make available public works reconditioning machinery to assist in construction and maintenance of landing strips for municipalities.

▶ That all B. C. municipalities be encouraged, pointing out the potential value of open spaces existing for aircraft landing, suggesting that where open spaces suitable

▶ **Triple Tail.** The Bellanca tripe-tail tail, unique among piston-engine light planes, is designed to make the plane upsetproof.

Wheel controls have been substituted for the gas-war stick controls. The landing gear is retracted manually by a torque tube and chain drive, with installation of an electric motor possible if desired.

material to facilitate development of Canadian national resources in northern Canada and that aerial facilities and cooperative regulations be provided to assist air veterans in participation.

Of 500 cities, towns, and villages in Canada with populations of 1,000 or more, approximately 400 have no aviation services and approximately 400 have no landing facilities. It was proposed that an initial expenditure of approximately \$20,000,000 would place approximately 400 of these communities on the post-war air map, providing aviation development at an average cost of \$50,000 each.

It was reported that several tourist hotels and resort areas in Ontario are planning to develop landing strips for air tourist accommodations as soon as transport and equipment become available.

These facilities are aimed largely at American air tourist trade. In 1939, of \$390,000 American tourists who visited Canada and spent an average of \$100 each, 35 percent came by plane and three spent on an average of six times as much as the other tourists.

New Otto Field Licensed

Brownson S. Otto has just received for his new Lake Bushquash airport, at Bushquash, N. J., the first air agency certificate granted by CAA to a New Jersey operator since the beginning of the war. The certificate approves the Otto Aviation Corp.

Number vs. Cost

Opinion of Canadian aviation interests on post-war airports, is more in line with proposals of the Personal Aircraft Council of the American Institute of Aeronautics, the National Aeronautics Association, and the Non-scheduled Flying Club of Canada. For CAA, then, with the ideas of some government officials in this country who are seeking out-loud airports, lower in number.

At the first of a series of provincial air conferences, recently at Kamloops, B. C., it was agreed that the provinces, municipalities and towns should "go ahead with their own plans" to build minimum landing facilities, minimum level grass landing areas about 2,500 feet long, with no obstructions over 30 feet high within 1,500 feet of the field, with a telephone, if possible, and a supply of oil and gasoline. Other facilities would be added as needed.

ground and flight school, pilot's equipment, hangar, etc. should be provided. The airport, adjoining a lake-front resort hotel, is planning to add planes and instructors to handle an expected increase in student flying, during the remaining vacation season.

Airworthy Licenses Granted 11 Planes

New airworthiness certificates have been issued to 11 lightplanes by the Civil Aeronautics Board. The planes were purchased from military surplus by individuals and firms.

List of the aircraft numbers, buyers, engine, and date of manufacture follows:

■ **4811-1-1048** E. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1049** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1050** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1051** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1052** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1053** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1054** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1055** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1056** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.
■ **4811-1-1057** G. H. Brown, 48 Airport Road, New York 17, N. Y. Engine: 100 hp. Pratt & Whitney. Date: 10/2/45.

Briefing For Private Flyers and Non-scheduled Aviation

Curtis Wright of Los Angeles has grounded his Flycatcher, readable helicopter prototype, after a brief flight which proved it would ascend and could be controlled. Reason for grounding is because some components of the prototype were not flight-strengthened. He plans to develop the prototype in Los Angeles to the public in a book, and build a duplicate for smaller display in eastern areas. He hopes by this means to finance building of a third Flycatcher fully stressed, for extended test flights. If the second model meets design indications he then expects to begin commercial production of the readable helicopter.

DISCRIMINATION AGAINST FLIERS—Attitude of the National Park Service toward proposed establishment of air landing strips for convenience of post-war air tourists in the parks, amounts to discrimination against the flier in the spirit of many aviation abhorers. While hundreds are proposed for national parks, A. D. Thompson, executive director of the service, said representatives of the Non-scheduled Flying Advisory committee for CAA recently, that they wanted no airports in the National Parks. He said they couldn't preserve "the spirit of wilderness" in the parks with airplanes buzzing around. It is reported that the opposition is concentrated in the Washington office, because a number of the National Park Service have expressed a desire to provide air landing facilities in their parks.

AIRPORT SERVICE DIRECTORY—A survey which might well be copied by other flying organizations is now being undertaken for the Washington, D. C., area by the Aero Club of Washington. It is a directory of airports and airways within a 100 mile radius of the district, for the use of pilot members who are contemplating short cross-country flights. Information compiled to include physical data about the fields, type and quality of service provided, exorbitant or reasonable prices charged for service, and other information. Pilot members of the club have been urged to contribute their information on specific fields to the executive in charge of the project.

FOR HOT FLYING—Adjustment of "hot" military pilots is the different kind of flying done with civilian lightplanes, is considered as serious that the AAF Office of Flight Safety is reported to be preparing a special manual for pilot covering this subject. At least those accidents have already been reported and numerous complaints about the "inhibitions" flying of returned military pilots have been received by CAA. Part of the difficulty is that the AAF and Navy fliers, who have been used to high performance and high horsepower, expect to use the same type of planes as the civilian pilots. Also, fighter pilots, especially, are taught to take flying risks in low-altitude maneuvers which are still much more hazardous in the lower-powered, lower-stressed civilian aircraft.

ONE-HALF CENT A POUND—Michigan's new aircraft registration requirement, effective after Aug. 1, calls for a fee of one-half cent a pound net weight empty for all aircraft operated over the lands and waters of the state, except scheduled airlines, state or federal aircraft and non-resident planes. Those who operate in the state for 90 days without registration, manufacturers and dealers, and pilots, will incur license numbers similar to the dealer's license label, issued for automobiles. The registration is annual, with a half-year license sold to owners of planes registered after Feb. 1.

POSTPONE ELDON DEDICATION—Postponement of the dedication of the model airport at Eldon, Mo., until early summer, 1946, has been announced by the Eldon airport committee, the Missouri State Department of Resources and Development, the Personal Aircraft Council of the Aircraft Industries Association, because of DOT travel restrictions and to give manufacturers some time to prepare exhibit of hangars and airport equipment. A booklet "Model Airport," containing factual information about the planning, financing and construction of the small community airport, is being prepared and will be distributed at the dedication, which originally had been scheduled for June of 1945.

—Alexander McFurely

New Airline Troop Movement Contract To Use Army C-47's

Carriers await details of plan that would place 70 to 80 new ships and 260 pilots at their disposal to aid redeployment; move favored above equipment "pool" plan of ODT.

By MERLIN MICKEL

The airlines late last week were awaiting details of a plan under which they would receive 70 to 80 C-47's and 260 Army pilots to aid in redeployment.

Meetings were being held to discuss arrangements to carry out the troop movement program, outlined by the War Department.

Four Line Task—Since redeployment is an east-west proposition, it appeared best to assume that the major portion of the work would fall on the four transcontinental operators—Northwest Airlines, United Air Lines, Transcontinental & Western Air and American Airlines System.

Early indication was that the plan would augment rather than interfere with scheduled commercial air transportation. A War Department memorandum said the AAF was making plans and former airline pilots available to

move 25,000 soldiers a month across the U. S. Orders were issued at once to prepare the ships and make the personnel available.

At least part of the equipment was expected to be new C-47's, just off the production line.

New Contracts—Apparently the new project was to be under contract with the Army, since it involved wholesale movement of Army troops. This would mean new agreements, rather than a resumption of the domestic Air Transport contracts, suspended some months ago while overseas ATC contracts continued.

"This operation," the War Department said, "will be carried on by the commercial airlines under contract with the Army, in the same manner as the air movement of military personnel overseas by the commercial planes and the Air Transport Company."

The airline hope was that the



NEW MARS CARGO METHOD:

Customary sketch of Martin Mars shows deckhand handling of cargo under the new method developed by the Naval Air Transport Service (Aviation News, July 30.) Load is prearranged on flats numbered according to location on the ship, bound to new and unused planes with the aid of a hoist built into the wing. The system is said to save both time and paper work.

More C-47's?

The possibility that the 70 to 80 C-47's promised by the War Department for redeployment operations might be the forerunners of many more for the same purpose, was seen in a "rush" major overhaul job under way at the Big Sea Remounts, Calif., repair base of Air Technical Service Command.

Nearly 300 Army C-47's were flown into the base two weeks ago and given high priority for overhaul and subsequent delivery to the Air Transport Command.

operation would be on a per-trip basis, rather than on a contract basis as were the ATC contracts. In any event, they considered it preferable to the pooling of regular airline planes listed at by Col. J. Monroe Johnson, director of the Office of Defense Transportation, earlier (Aviation News, July 30).

Army Answer—The new troop movement provision apparently was the Army's answer to Monroe's suggestion that the War Department advance a plan under which the airlines, already carrying traffic of which 75 percent is military priority passengers, might participate further in redeployment schedules. Unofficially the report was that ODT had made the same request with respect to buses, but these were not mentioned in the Department's announcement of the airline plan.

Early intimations was that the redeployment flights would originate for the most part at the New York area, going from there to Los Angeles, San Francisco, and Seattle.

The general expectancy was that the plan could be in effect by Aug. 15.

Simplified Ticket Forms Set For Interline Use

Simplified interline passenger ticket will be used by the airlines, starting Sept. 1, to save time for the passenger and work for the ticket agent and airline accounting office.

The new ticket, long under discussion, is a book form instead of the old "stub" type. Carriers permit one writing instead of several. Air Transport Association

has it on the first real improvement in long-trip passenger ticketing in the transportation field. Many of the airlines are expected to adopt the same system for their own lines. A new form baggage ticket will go into effect on the same date.

C-54 Tests Hint Early Availability

Passenger version certification was started by CAA, believed aimed at planes intended for airlines.

Flight tests on its original passenger version, Douglas C-54 were started by the Civil Aeronautics Administration, and later model tests will follow.

Start of the work increased the possibility that the airlines may soon begin to receive planes of this type. There was no hint, however, that the ship underwent the tests, which aim toward award of civil type airworthiness certificates, was one of 20 that have been declared surplus by the Army.

Converted Douglas C-54's are planes originally designed for airlines, but taken over by the Army for war purposes before the lines could get delivery. With four fuel tanks, of 480-gal. capacity each, in the fuselage, and 10 in the wings, the Army, they have 56 seats in a four-abreast arrangement two on either side of the aisle.

There is a good chance, however, that original tests in the current series may be substituted for two of the present ones, increasing seating capacity to 44 and possibly more, depending on whether there are four or five seats abreast.

There is little doubt that the plane will be certificated, perhaps with some changes, although for what weight is not indicated. CAA engineers hope the initial tests can be completed by Aug. 15.

Advantage—The expectation elsewhere is that soon thereafter the 38 will be allocated to American Export Airlines, Pan American Airways, and Transcontinental & Western Air, route possibilities in Civil Aeronautics Board's recent North Atlantic decision.

The flight tests began at Santa Monica, Calif., July 27, and were continued at Tulsa, Okla., using the C-54 for airport calibration and proving of other flying characteristics.

Following those, another C-54 with strong wing fuel tanks will be tested for fuel runoff, and later

Customers Deluge New Cargo Group

National Skyway Freight Corp. has been deluged with inquiries concerning availability of the recently-bought fleet of Budd Aircraft Co. cargo airplanes. The scheduled cargo contract work.

At Long Beach municipal airport, Calif., headquarters of NSFC, executives are expected to complete the completion within a week of a rate structure on both ton-mile and cubic foot basis.

Planes Used—While the company purchased from NSFC the entire existing group of 14 B-24 Superfortresses in this country for \$45,000 (Aviation News, July 30), only eight have been returned, seven for service, and the prototype, damaged in testing, for spares.

Four of NSFC's 14 B-24s have been sold to Atlantic Oil Co. of Ecuador, and two to Adcock Aircraft Co. for sale.

This month's batch of new cargo planes, being installed on a third C-54, will be tested.

Civil certification will require compliance with service bulletins and technical orders and perhaps certain modifications, including damp valve installation and mechanical interconnection of wing flaps. Following the basic tests, other models of the C-54 (A, B, D and E), having varying gross weights and fuel capacity, will require review by CAA prior to authorization of certification flight tests.

Pan Am Domestic Routes Supported

Senate Commerce Committee members ask early hearings on overseas carrier applications for inland schedules.

Thirteen members of the Senate Commerce Committee have agreed to send to the President a statement on international air policy reviewing the history of community legislation and urging the Civil Aeronautics Board to give early hearing, in the interests of "fair play," to Pan American Airways' application to link its overseas gateways by express routes across the country.

Now that the Board has permitted domestic carriers to participate in the international field, the report, "our overseas air carriers, now authorized to operate from the United States only in international

service, should participate commensurately in the far larger domestic field," lest serious injury accrue both to "those who have pioneered in the overseas field" and to the position in international air commerce.

Points to Pan Am—This undoubtedly referred to Pan American, which has applied for eight Great Circle express routes to join New York with London, San Francisco and Chicago, which was made an inland overseas terminal in the North Atlantic case.

The committee members also expressed the opinion that authorization of the carrier to exchange in domestic air transportation should be on the same temporary and experimental basis as operations abroad by domestic airlines. Certification in the North Atlantic case are for a seven-year period.

The statement, issued in lieu of an interim committee report, emphasized that the committee is continuing its study of C. 5, post-war policy in international air transport with a view to recommending such legislation as developments abroad and the national interest may require.

American Report Airlines' chairman of the board, John R. Slater, has gone to Paris to attend a meeting early this month of the International Air Transport Association of which he is an Executive Committee member. Eventually, he plans called for travel over sections of the four major international air route awarded Areas recently by CAA.

Sudden British Election Upset Leaves Air Policies Undecided

Signs point, however, to internal changes without revision of airline structure as it affects other nations; transport monopoly seen unopposed by new government.

So unexpectedly overwhelming has been the victory of the Labor Party in the British elections that the question of the United Kingdom's future international aviation policy is still a guessing game that anyone—including, probably, the Labor Party itself—can play.

Yet there are indications that while the inner structure of Britain's aviation agencies may change under a Labor government, her policy as it affects other nations may not. The basic needs of Britain remain the same under Attlee or Churchill, and as an instrumentality of British foreign trade and a basis between Regime communications, her aviation will have the same job to do.

Party Ideas—Theoretically, Labor would like to withdraw aviation from international competition. The party's stand is that of the Australian and New Zealand governments which are also Labor-dominated—that international airlines should be run by some

sort of United Nations operating company. As a matter of domestic economic philosophy, the party further believes in the Socialist doctrine of public ownership of public utilities.

Before the elections, Labor actively supported internationalism and attacked the White Paper policy of the wartime coalition government from that angle. The Chicago Conference demonstrated, however, that few nations were willing to embrace the proposal, and its subsequent playing down during the election seems to indicate a new party construction that as an immediate goal, the ideal is impracticable.

If there is this to be competition between nations, any British government must do the best it can to protect its own interest. Since the British generally feel that they are largely unopposed to enter the international air traffic race, and are sought by both Conservatives and Laborites for regulated competition that will preserve as much of Britain's advantage as possible.

'Pious' Fear—This has been the reply which the Churchill government acted in Chicago and elsewhere, without strenuous opposition from Labor. The mere reestablishment of an Empire pooling arrangement between the operating companies of the Commonwealth nations seems to be satisfactory to the Attleeans, and it probably is to Labor as well.

When it comes to the form of British competition, a transport monopoly is not as difficult objectionable to Labor, and it has not objected to the division of services between three chosen instruments that would operate the Empire routes, internal and continental services and the new South American lines as separate companies.

The attitude toward the participation of private capital in these companies might be another matter. Nationalization of the railroads, which is a campaign pledge, would mean the withdrawal of private funds from the Railway Air Services company. As for the rest, the government might

for a while be content with the restrictions placed upon private investment in the British Overseas Airways Corporation and in the British South American Airways which were assigned to the steamship companies.

Personnel—Changes in personnel will, of course, be inevitable. Lord Sempson will probably go out as Minister of Civil Aviation, although the party has no outstanding candidate for the post. Mentioned in early discussion has been Evelyn Storer, selected on the Labor ticket from Devonport and a spokesman on aviation matters in Parliament, but the party may have to resort to one of the unknown "bright young men" in its ranks.

Brigadier General Critchley, the government-appointed director general of BOAC, has been unpopular even with the support of Churchill, who appointed him, but there is no logical successor in the ranks of Labor and the choice may not be a political one.

Reports so far from London indicate that the party has not completely made up its mind about its aviation policy. But an important fact to remember is that while the Labor Party is Socialist, it is also British. This means that it will be likely to stay by certain long-established policies, and that it will probably support old forms.

J. E. Casey Heads Lines' Policy Unit

Joseph E. Casey, former member of Congress and now legal consultant with Transcontinental & Western Air, has been elected to head the Airlines Committee for U. S. Air Policy.

The committee announced the selection shortly after the resignation of Alexander B. Hayes, chairman for the past year, to rotate the post among the ranks of Chadbourne, Wallace, Park & Whitehead of New York City.

Background—Casey was a Representative from Massachusetts from 1934 to 1942. He is a member of the U. S. Supreme Court bar, the Bar Association of the District of Columbia, the Massachusetts bar, and is associated with the law firm of Hale and Dorr in Boston. He has been with TWA for about a year.

The Policy Committee is made up of representatives of 16 domestic airlines and American Export Airlines, to further the cause of

regulated competition in international air transportation. The opposite view, favoring a community company U. S. Flag Line for overseas air operations, is taken by United Air Lines and Pan American Airways.

Casey and he expected the committee's work to aid in the enhancement of this country's position in international air transportation. Joyce, who leaves the committee in accordance with an understanding at the time of his appointment, headed the Civil Aeronautics Board's award of certificates for North Atlantic operations to three U. S. companies, and urged committee members to continue their united efforts in behalf of competition. He predicted that certificates will go to other companies at other overseas cases pending before the Board.

'First' Feederline Inaugurates Service

Boair, Inc., of Dallas, started its CAB-authorized feederline operation last Wednesday, and a round trip carrying mail and cargo between Houston and Amarillo.

Survey flights on the route, AM 64, were completed a year ago, but various delays were encountered, among them equipment difficulties and legal questions of organization structure.

Passenger Service—Although the first few flights were to be with cargo and mail only, passenger service was to start within a few days. The line has four Lockheed Electras, one of which is being converted while the other three are in use or ready for use.

Scheduled mail is expanded later to a two round trip a day.

Boair's certificate, first given a feederline operation, was granted by the Board in December, 1945, on a three-year authorization, expiring Dec. 31, 1948, on which reports were to be submitted periodically. CAB expressed a doubt at the time to supplement its studies of local service by "accumulation of actual experience with new types of operation."

Air Ports—A condition of the certificate was that all points on Boair's route, which has its weekly Texas service from Dallas to San Angelo, Abilene, and Lubbock between Houston and Amarillo, be served on each scheduled trip.

Because of delay in getting the operation started, the Board, in a supplemental opinion upholding



Gets CAB President Russell H. Adams, (above), assistant director of CAI's Economic Bureau since August, 1943, has been named director, succeeding Dr. Irvine R. Barnes, who becomes the Board's Economic Advisor.

the line's organization, recently gave the company opportunity to apply for an extension of the expiration date.

Chicago Air Pacts Gain Eight Members

Acceptance of various sections, pending agreement on a program announced by State Department, Paraguay most active.

The State Department last week announced acceptance, recently, of various Chicago aviation agreements by Paraguay, Australia, Belgium, Iraq, Luxembourg, Sweden, Switzerland, and Syria.

The following actions were taken:
Paraguay accepted the Interim Agreement on International Civil Aviation, the International Air Services Transit Agreement (two freedoms-of-the-air), and the International Air Transport Agreement (five freedoms). The Paraguay Ambassador also signed the Convention on International Civil Aviation but his government must ratify it before it is binding.

The Australian Minister signed the transit agreement.

Belgium and Iraq accepted the transit agreement. Austria and Luxembourg accepted the interim agreement and her Minister also signed the convention and the transit agreement.

Sweden accepted the transit agreement.
 Switzerland accepted the interim

and transit agreements and her Minister signed the convention.
 The chairman of the Syrian delegation to Chicago signed the transit and transport agreements with the reservation that Syria does not grant the fifth freedom. Syria accepted the interim agreement.

The Provisional International Civil Aviation Organization, established under terms of the interim agreement, is scheduled to convene in Montreal August 18. The United States delegates, Edward P. Warner, Civil Aeronautics Board vice-chairman, plans to leave for Montreal several days ahead of the opening session.

CAB Economic Unit Officials Promoted

Two important promotions in the Civil Aeronautics Board's economic staff were announced last week. Dr. Irvine R. Barnes, director of the Board's Economic Bureau July, 1944, occupies the newly created position of Economic Advisor to the Board. Russell H. Adams, formerly assistant economic director, becomes director.

Considerable aviation duty and long-range planning is entailed in Barnes' new job. He will consult with other federal, state, and municipal agencies and air carriers, in addition to working on special economic programs facing the Board as aviation grows.

Largest Section—As the new director, Adams will head the largest division of the Board. He joined the then Civil Aeronautics Authority in 1938, when it was established in August, 1938, and became assistant director of the Economic Bureau two years ago this month.

Director of the Bureau before Barnes took over (August 1938, July 31, 1944), was Raymond W. Stough. Stough was then made special assistant to the Board, but after has become director of CAB's Alaska office.

New Twin Cities Flights

Two additional daily round trips, one between the Twin Cities and Seattle-Tacoma, the other between the Twin Cities and Portland, will be operated by Northwest Airlines beginning Aug. 13, to relieve a two-month bottleneck at Minneapolis airport. The new schedules, extensions of Chicago-Twin Cities flights, will put into service a DC-3 recently obtained from the Army.



AIRPORT RECORDERS

One of the features of the air traffic center at LaGuardia Field, New York, is the battery of automatic recording machines, which record conversations between pilots and the tower while planes are in the control zone. A similar installation is in use at Washington National Airport.

TRANSPORT—51

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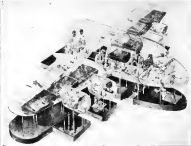
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Kibarsite Time Saver: Fuel, oil, and hydraulic systems of a Douglas post-war transport are duplicated in detail in this functional mockup. Constructed of molded plexiglas and used by the Army, it cost around \$70,000. A similar mockup, for airline use, built of metal with cutouts will still will below that level, according to the company.

Airline Trainers Offered By Douglas

In coming weeks, major airlines that have ordered, and may buy, Douglas Aircraft's postwar transport... DC-4, DC-4A, and DC-7... will learn in photographic detail of the supplementary services the West Coast company will offer them.

Its extensive Douglas service brochures are in the making, and the first has been mailed, outlining the company's proposal to sell and rent both portable and stationary mockups to train airline personnel in the servicing and maintenance of the planes they will operate.

Cost Saver:—Object of the airline use of functional mockups will be the elimination of "costly experimentation" following the arrival of new equipment. An explanatory forward in the mock-up brochure quotes an airline estimate that time lost by unskilled ground crews during stops might cost an airline operating a fleet of

50 planes, \$750 a day—a loss that if saved would pay off the cost of training aids within a short time.

British Airline Pool Refused By Canada

Canada has declined to pool operations with Great Britain on trans-Atlantic air schedules. The Canadian attitude, based on the fact that Canada has its own government-owned air transport service ready for trans-ocean operation, was announced at the British Commonwealth Air Transport Council meeting in London.

Pooling of services, notably to India and Australia and New Zealand, already has been arranged with other parts of the Empire and there is a possibility that Canada may come into the pool to operate one section of trans-Pacific service, with Great Britain, Australia and New Zealand taking another.

System Doubtful:—Air Marshal G. O. Johnson, Canadian ambassador, expressed the view that "this system is not the best method for the North Atlantic." He explained that "while generally we agree with the principle of pooling, parallel and independent operations is undoubtedly the best on many routes. There is adequate opportunity on the North Atlantic route for operations completely separate in

every respect. This does not mean that there will not be the fullest cooperation between the two countries."

N. Atlantic Route Asked By Pan Am

Pan American Airways has joined PCA and Northeast Airlines in asking the Civil Aeronautics Board to reopen the North Atlantic case. It seeks a change in that decision "to permit the proposed trans-oceanic airline to compete for a fair share of trans-Atlantic traffic" with TWA and American Airlines System.

Emphasizing that it did not seek reconsideration of general policy questions, such as competition in international air travel, or "how TWA came to be certificated for service on the North Atlantic at all," Pan American said it was asking the Board to reconsider "whether it actually desires to perpetuate the injustice to Pan American Airways, the pioneer trans-Atlantic air carrier, and to be guilty of the gross favoritism to TWA, and also of the favoritism to American Airlines (through its subsidiary American Export), that would result if the Board were to permit this arbitrary decision to become final."

Detroit Airport Site List Stands At Four

Three potential sites for Detroit's main airport, not including the northwest location favored by the airlines and the city's common council, are being considered by the Metropolitan Aviation Planning Authority.

Locations are the Wayne County Airport, now an Air Transport Command base; the proposed international site, seven miles south of Windsor, Ont.; and the Ford-Dulles site, west of Dearborn. **Schedule Firm:**—Without a dissenting vote, the Authority passed a resolution asking airlines serving the city to present an "immediate solution to the existing dangerous condition" at the present city airport.

ENGINEER

To examine potentialities of air defense equipment and to determine the best way to use it, the Air Force is seeking an experienced engineer, preferably a civilian, to study the problem. Write or telephone to: 1000 AVIATION NEWS, 1000 West 42nd Street, New York 18, N. Y.

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Speedy Action By CAB

PROMPT ANNOUNCEMENT late last week by Civil Aeronautics Board of its decision on salient points of the new Part 63 of Civil Air Regulations affecting non-transport plane design is receiving commendation from the aircraft industry.

Realizing that manufacturers' long-range post-war design plans were depending on settlement of certain controversial points to be embodied in the new regulation, the Board has relieved that uncertainty by its five-point announcement made less than a week after completion of a hectic three-day hearing of industry and CAA technical experts on the points at issue.

Generally, the Board's decision is viewed as a sound compromise of the CAA's conservative and the manufacturer's more liberal philosophies on safety in aircraft design, leaning in several important respects toward the more liberal viewpoint.

The decision provides:

1. The proposed "personal" plane category is eliminated, leaving four non-transport categories, normal, utility, acrobatic and restricted.

2. Maximum allowable stalling speed will be limited to 70 mph for single-engine aircraft and for twin-engine aircraft of 6,000 pounds or less gross weight which fail to meet the single-engine climb requirement indicated herein.

3. Climb requirement for certification will be for an angle of climb of at least one to 12; and for a rate of climb of at least 200 feet per minute.

4. Multi-engine aircraft of above 6,000 pounds gross weight must have a rate of climb with one engine inoperative of at least 1.03 multiplied by the plane's stalling speed in normal landing condition (using wing flaps if the plane has them) at a height of 5,000 feet with cowl flaps set for cooling on a hot day.

5. Lifted load factor required for maneuvering in aircraft of normal category shall be 2.0 except that aircraft characteristically incapable of spinning may have a 3.5 load factor.

Attention is directed by engineers to the fact that points 2 and 4 do not require a stall speed limit for planes of over 6,000 pounds that will meet the rate of climb requirement with one engine out. As an example, for a twin-engine plane with a 90 mph stalling speed the required rate of climb with one engine out under the new requirement would be 80 feet per minute. Yet it could have a stall speed of 70 or 90 mph, if it showed a correspondingly higher rate of climb with one engine out.

This requirement is seen as significant in view

of the trend toward higher stalling or landing speeds in the vital transport aircraft and indicates a CAA viewpoint which may well be extended to cover transport aircraft in subsequent regulations. A decision to revise transport regulations in such a direction is considered essential by most engineers in the government and in the aircraft and airline industries.

Only major phase of Part 63 still to be settled is the power plant section, in which the manufacturers have asked CAA engineers to reconsider some of the requirements. A new recommendation on power plants is expected to be forthcoming from CAA soon.

Meanwhile, the manufacturers may at least go ahead with their structures design without waiting for formal promulgation and issuance of the entire non-transport regulation. As pointed out here July 16, however, the ultimate goal of both government and industry still should be the setting up of limitations only on minimum performance, and allowing the industry widest freedom, commensurate with safety considerations, meeting those standards.

Another Airline War Job

ACTIVATION BY TOOK BRINGS criticism from the Office of Defense Transportation on Capitol Hill to initiate the action, the War Department and Army Air Forces are to be congratulated on progress of plans to contract with the four transcontinental airlines to aid in alleviating the redeployment jam on the railroads.

Using Army planes and pilots, the airlines hope to carry 25,000 soldiers a month, in addition to the regularly scheduled airline services. The program should be underway by Aug. 30, with maximum operation anticipated a fortnight later. Newark, Los Angeles, Seattle, and San Francisco will be the main terminals under present plans. The operation is expected to continue at least eight months, or until the railroad traffic problem is considered sufficiently relieved.

War Department officials assure the airlines that the new contract program will not interfere with contemplated return to the lines of military pilots with airline experience, or with any allotments to the airlines of additional transports.

As in the early days of the war, the domestic airlines have been called upon to take over a major war job on short notice. Despite their own mounting problems, not the least of which involve shortage of personnel with the continued month by month gains in traffic, we forecast that they will excel their own amazing past performance.

ROBERT H. WOOD

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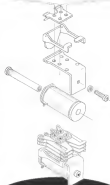
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